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W. E. GARDNER, M. D.
Suite 905 Heyburn Bldg.
Consultant

# *a* new anti-anemic preparation with a tang and zest all its own

# AUTOLYZED LIVER *Concentrate*

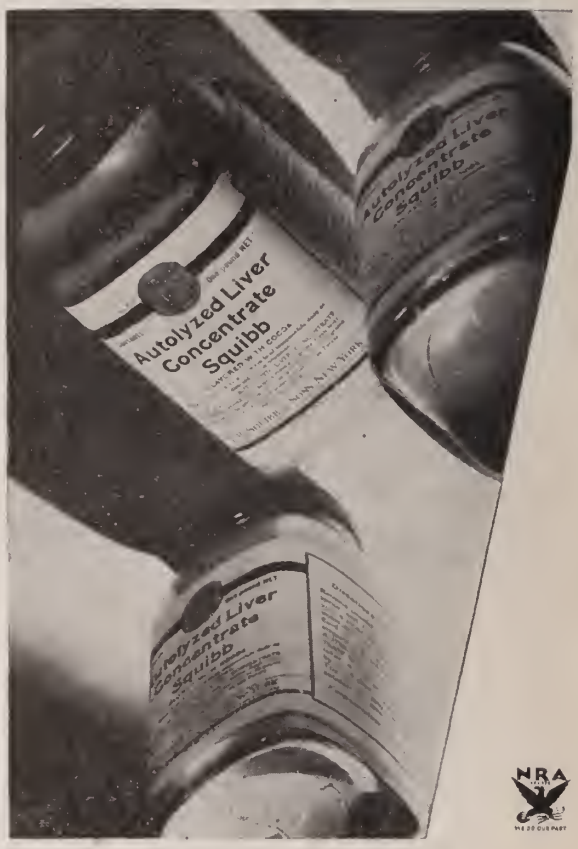
# SQUIBB

AUTOLYZED LIVER CONCENTRATE SQUIBB provides all the blood regenerative properties of whole liver and yet its taste is far removed from liver itself. It has a tang and zest all its own when mixed with sweet butter and spread on bread. It can be taken also in warm bouillon or dissolved in milk.

Autolyzed Liver Concentrate is not like any other liver preparation. It is not an extract. It is prepared from whole liver, *autolyzed*, powdered and flavored with cocoa. Its use is promptly followed by a noticeable increase in red blood cells and hemoglobin and a noteworthy improvement in appetite, weight and strength.

Although primarily designed for use in the treatment of pernicious anemia, it deserves study as a diet supplement of convalescents particularly after operations where the blood loss has been severe or in the anemias of pregnancies. In addition to its anti-anemic potency it has almost twice the Vitamin B and G activity of dried yeast.

Autolyzed Liver Concentrate Squibb is economical to use—costing as little as 7 cents a day for the first year's treatment of an uncomplicated case of pernicious anemia. One gram of the concentrate is equal in anti-anemic potency to from 20 to 30 grams of fresh liver.




*Manufactured under license to use U. S. Patent Application Serial No. 620,301. Marketed in ½ and 1-lb. bottles. Council accepted*

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SAFE AND WHOLESOME FOR BABIES

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PREOPERATIVE SKIN DISINFECTION

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Distribution of weight to a much broader surface of the back and continuous uplift without constricting lines are improved features that alleviate undue abdominal pressure and restore more natural equilibrium.

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EMERSON A. NORTH, M. D.,
**Visiting Consultant.**

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Resident Medical Director

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For terms apply to THE CINCINNATI SANITARIUM,
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## CALENDAR OF COUNTY SOCIETY MEETINGS

| COUNTY | SECRETARY | RESIDENCE | DATE 1933 |
|---|---|---|---|
| Adair | W. J. Flowers | Columbia | January 3 |
| Allen | A. O. Miller | Petroleum | January 27 |
| Anderson | J. B. Lyen | Lawrenceburg | January 1 |
| Ballard | F. H. Russell | Wickliffe | January — |
| Barren | C. C. Turner | Glasgow | January 17 |
| Bath | H. S. Gilmore | Owingsville | January 8 |
| Bell | O. P. Nuckols | Pineville | January 12 |
| Boone | R. E. Ryle | Walton | January 17 |
| Bourbon | W. B. Hopkins | Paris | January 18 |
| Boyd | M. D. Garred | Ashland | January 2 |
| Boyle | P. C. Sanders | Danville | January 9 |
| Bracken | J. M. Stevenson | Brooksville | January 1 |
| Breathitt | O. M. Goodloe | Jackson | January 16 |
| Breckinridge | J. E. Kincheloe | Hardinsburg | January — |
| Bullitt | S. H. Ridgeway | Shepherdsville | January — |
| Butler | G. E. Embry | Morgantown | January 3 |
| Caldwell | W. L. Cash | Princeton | January 2 |
| Calloway | W. H. Graves | Murray | January 10 |
| Campbell-Kenton | Luther Bach | Bellevue | January 4-18 |
| Carlisle | G. W. Payne | Bardwell | January 2 |
| Carroll | J. M. Ryan | Carrollton | January 9 |
| Carter | R. G. Townsend | Grayson | January 9 |
| Casey | Wm. J. Sweeney | Liberty | January 25 |
| Christian | M. A. Gilmore | Hopkinsville | January 16 |
| Clark | R. H. Scobee | Winchester | January 19 |
| Clay | J. L. Anderson | Manchester | January — |
| Clinton | S. F. Stephenson | Albany | January 20 |
| Crittendon | C. G. Moreland | Marion | January 8 |
| Cumberland | W. F. Owsley | Burkesville | January 3 |
| Daviess | Wm. L. Woolfolk | Owensboro | January 9-23 |
| Elliott | | | January — |
| Estill | Walter Cox | Irvine | January 10 |
| Fayette | John Harvey | Lexington | January 9 |
| Fleming | J. B. O'Bannon | Flemingsburg | January 10 |
| Floyd | E. E. Martin | Allen | January 12 |
| Franklin | C. E. Youmans | Frankfort | January 4 |
| Fulton | Glynn F. Bushart | Fulton | January 10 |
| Gallatin | J. M. Stallard | Sparta | January 18 |
| Garrard | J. B. Kinnaird | Lancaster | January 18 |
| Grant | C. A. Eckler | Dry Ridge | January 17 |
| Graves | H. H. Hunt | Mayfield | January 2 |
| Grayson | R. F. Porter | Leitchfield | January 25 |
| Green | S. J. Simmons | Greensburg | January 1 |
| Greenup | Carl M. Gambill | Greenup | January — |
| Hancock | F. M. Griffin | Hawesville | January 1 |
| Hardin | D. E. McClure | Elizabethtown | January 11 |
| Harlan | Clark Bailey | Harlan | January 27 |
| Harrison | W. B. Moore | Cynthiana | January 1 |
| Hart | S. F. Richardson | Munfordville | January 2 |
| Henderson | Walter O'Nan | Henderson | January 8-22 |
| Henry | Owen Carroll | New Castle | January 29 |
| Hickman | Chas. Hunt | Clinton | January 4 |
| Hopkins | David L. Salman | Madisonville | January 4 |
| Jackson | | | January 6 |
| Jefferson | Chas. M. Edelen | Louisville | January 1-15 |
| Jessamine | J. A. VanArsdall | Nicholasville | January 18 |
| Johnson | P. B. Hall | Paintsville | January 13 |
| Knott | M. F. Kelley | Hindman | January 27 |
| Knox | F. R. Burton | Barbourville | January 26 |
| Larue | D. V. Gaddie | Hodgenville | January — |
| Laurel | Oscar D. Brock | London | January 10 |
| Lawrence | L. S. Hayes | Louisa | January 15 |
| Lee | A. B Hoskins | Beattyville | January 13 |
| Leslie | John H. Kooser, Acting Secretary | Hyden | January — |
| Letcher | R. Dow Collins | Whitesburg | January 30 |
| Lewis | J. D. Liles | Vanceburg | January 15 |
| Lincoln | Lewis J. Jones | Houstonville | January 19 |
| Livingston | John L. Hayden, President | Salem | January — |
| Logan | Walter Byrne, Jr. | Russellville | January 1 |
| Lyon | | | January 16 |
| McCracken | Leon Higdon | Paducah | January 10-17 |
| McCreary | R. M. Smith | Stearns | January 1 |
| McLean | W. W. Spicer | Calhoun | January 11 |
| Madison | J. G. Bosley | Richmond | January 18 |

| COUNTY | SECRETARY | RESIDENCE | DATE 1932 |
|---|---|---|---|
| Marion | H. R. Wilbur | Lebanon | January — |
| Marshall | S. L. Henson | Benton | January 17 |
| Mason | Allen F. Murphy | Maysville | January 10 |
| Meade | A. A. Baxter | Brandenburg | January 25 |
| Menifee | E. T. Riley | Frenchburg | January — |
| Mercer | J. Tom Price | Harrodsburg | January 9 |
| Metcalfe | P. W. Bushong, Acting Secretary | Edmonton | January — |
| Monroe | Geo. E. Bushong | Tompkinsville | January — |
| Montgomery | D. H. Bush | Mt. Sterling | January 9 |
| Morgan | W. H. Wheeler | West Liberty | January — |
| Muhlenberg | Roy Orsburn | Greenville | January 24 |
| Nelson | R. H. Greenwell | Bardstown | January — |
| Nicholas | T. P. Scott | Carlisle | January 15 |
| Ohio | Oscar Allen | McHenry | January 3 |
| Oldham | S. J. Smock | LeGrange | January 2 |
| Owen | K. S. McBee | Owenton | January 4 |
| Owsley | D. E. Wilder | Booneville | January 1 |
| Pendleton | W. A. McKenney | Falmouth | January 10 |
| Perry | R. L. Collins | Hazard | January 8 |
| Pike | M. D. Flanary | Pikeville | January 1 |
| Powell | I. W. Johnson | Stanton | January 1 |
| Pulaski | W. R. Cundiff | Somerset | January 11 |
| Robertson | | | January 15 |
| Rockcastle | Lee Chestnut | Mount Vernon | January — |
| Rowan | G. C. Nickell | Morehead | January 23 |
| Russell | J. B. Scholl | Jabez | January 8 |
| Scott | F. W. Wilt | Georgetown | January 4 |
| Shelby | W. E. Morris | Shelbyville | January 18 |
| Simpson | N. C. Witt | Franklin | January 9 |
| Spencer | | | January — |
| Taylor | W. B. Atkinson | Campbellsville | January 4 |
| Todd | B. E. Boone, Jr. | Elkton | January 3 |
| Trigg | H. L. Wallace | Cadiz | January 31 |
| Trimble | | | |
| Union | D. C. Donan | Morganfield | January 31 |
| Warren | Hal Neal | Bowling Green | January 10 |
| Washington | J. H. Hopper | Willisburg | January 17 |
| Wayne | R. E. Teague | Monticello | January 4 |
| Webster | C. M. Smith | Dixon | January 26 |
| Whitley | C. A. Moss | Williamsburg | January 4 |
| Wolfe | G. M. Center | Campton | January 1 |
| Woodford | Chas. F. Voigt | Midway | January 4 |


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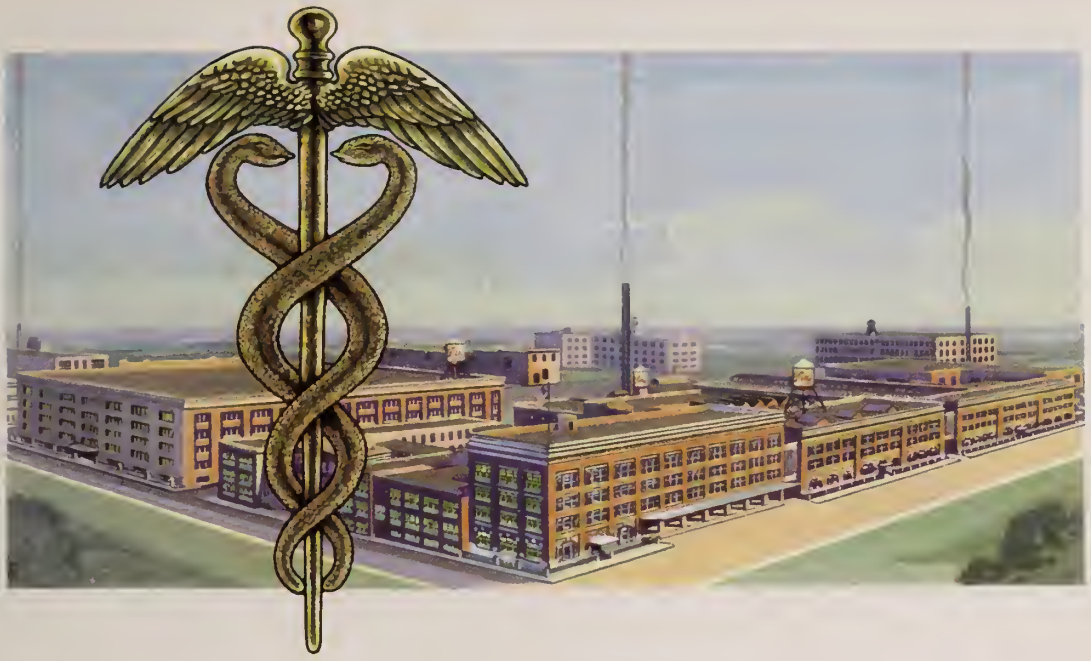



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ALTHOUGH the physician and the manufacturer of medical products have many unrelated problems, they are both interested in knowing the truth about therapeutic agents.

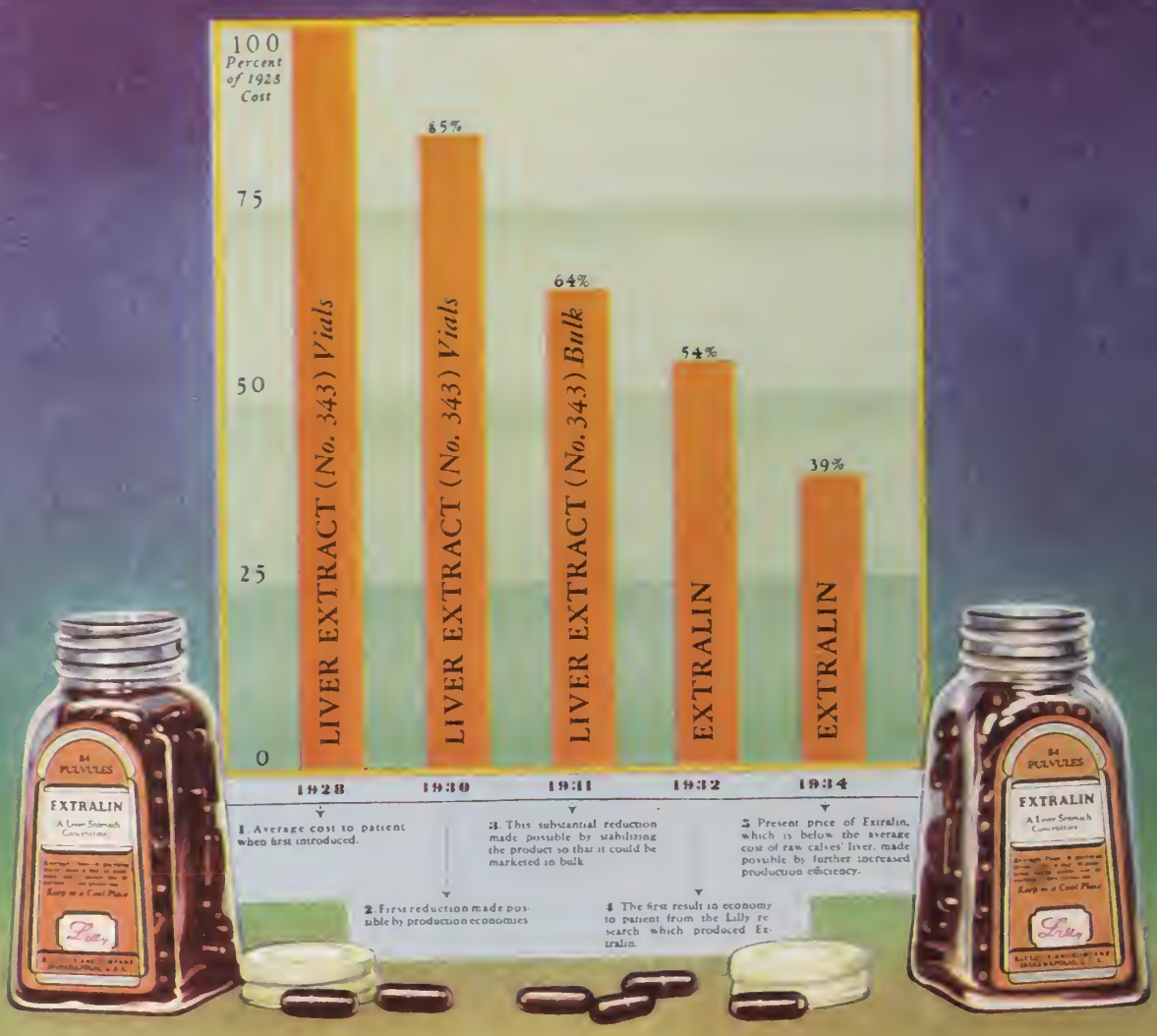
An increasing amount of research is being done by the manufacturing pharmacist but the final evaluation of a new therapeutic agent is accomplished in the clinic. The increasing co-operation between physicians and the maker of medical products is an encouraging trend.

The therapeutic availability of Iletin (Insulin, Lilly), the Liver Extracts and Concentrates, Ephedrine, Merthiolate, Amytal, and Sodium Amytal illustrates the accomplishments possible through the co-operation of investigators in clinics and universities with the research laboratories of the manufacturer.

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EXTRALIN. LILLY, is a liver-stomach concentrate for oral treatment of pernicious anemia.

POTENCY... Each lot is tested on pernicious anemia cases in relapse.

CONCENTRATION... Adequate doses can be given easily.

PRICE... Costs patient less than its therapeutic equivalent in raw calves' liver.

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Drug Addiction
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and
Nervous Diseases



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Our ALCOHOLIC treatment destroys the craving, restores the appetite and sleep, and rebuilds the physical and nervous condition of the patient. Whiskey withdrawn gradually; no limit on the amount necessary to prevent or relieve delirium.

MENTAL patients have every comfort that their home affords.

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The DRUG treatment is one of gradual Reduction; it relieves the constipation, restores the appetite and sleep; withdrawal pains are absent. No Hyoscine or rapid withdrawal methods used unless patient desires same.

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Consulting physicians and surgeons.

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**Louisville, Kentucky**

**PAUL A. TURNER, M. D., Supt. and Medical Director**

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FOUNDED 1876

Makers of Medicinal Products




## EXTRALIN, LILLY

A liver-stomach concentrate for the oral treatment of pernicious anemia, characterized by the following outstanding advantages:

Greater in therapeutic efficacy per unit of weight than any other commercially available liver product for oral administration.

Uniformly potent and dependable.

Supplied as Pulvules (filled capsules), easy to take, and conducive to uninterrupted treatment.

Lower in cost than an adequate daily ration of calves' liver.

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# KENTUCKY MEDICAL JOURNAL

BEING THE JOURNAL OF THE KENTUCKY STATE MEDICAL ASSOCIATION

**Published Under the Auspices of the Council**

VOL. 32 NO. 1 BOWLING GREEN, KY. JANUARY, 1934

## MATERNAL DEATHS

For the past two years the physicians of Kentucky have been making definite studies of the cause of maternal deaths, in co-operation with our own State Board of Health and the Children's Bureau. The Kentucky studies have been under the immediate supervision of Dr. Frances C. Rothert, who was formerly a member of the staff of the State Board of Health. The detailed report is in the press and will soon be ready for distribution. The story of the survey is best told in the following statement which has been released by the Children's Bureau:

"Maternal deaths are due in large part to controllable causes" is the outstanding conclusion of a committee of the Nation's leading obstetricians following analysis of the report made by the Children's Bureau of the U. S. Department of Labor of a detailed, scientific investigation of 7,380 deaths of mothers in 15 States, the first of this type and scope ever made in this country.

For years the maternal mortality in the United States has been generally recognized as high but no sufficiently comprehensive data were available to show what causes were actually responsible for the 16,000 deaths assigned annually to this classification. Upon request of State medical societies and State boards of health, the Children's Bureau with the assistance of its obstetric advisory committee undertook to ascertain and analyze the causes.

The investigation covered every maternal death in 13 States for two years and in two additional States for one year and included personal interviews with the physician, midwife, or other person who attended the women who died.

Riding mule-back over remote mountain trails, driving over the endless Western prairies, visiting big hospitals in the crowded cities, or the cabins of ignorant "granny" midwives in the far South, the investigators, all physicians, went wherever records of vital statistics bureaus showed that a mother had died.

Each chapter of the report, soon to come from the press, has been made the subject of careful comment by the Children's Bureau advisory committee composed of the following nationally-known physicians: Dr. Robert L. De Normandie, Boston, chairman; Dr. Fred L. Adair, Chicago; Dr. Frank W. Lynch, Berkeley, Calif.; Dr. James R. McCord, Atlanta; Dr. C. Jeff Miller, New Orleans; Dr. Otto H. Schwartz, St. Louis, Dr. Alice N. Pickett, Louisville.

The taking of the schedules in the various States was co-ordinated by Dr. Frances C. Rothert of the Children's Bureau who also analyzed the findings and wrote the complete report with the assistance of the above committee.

"Probably the most outstanding finding of the study," according to the committee, is that one quarter of all the maternal deaths investigated were not due to maternal mortality as the general public undoubtedly accepts this term. Careful follow-up of death records revealed that 1,825 women died following ending of pregnancy so premature that the infant could not survive. Of this number 1,324 died from sepsis, and in 50 per cent of the cases of known type these deaths followed attempt by the women themselves to avoid motherhood. Declaring that the study "shows very clearly the seriousness of the problem" the committee defines it as a "widespread sociological and economic problem which the medical profession must have help in solving" adding that "the physician has one great obligation—to teach the public the dangers entailed."

Since 40 per cent of all the 7,380 deaths in this study were due to sepsis and since the 1,324 septic deaths in the above group constituted 45 per cent of the deaths from this cause, "the serious condition presented by this cause of death" is obvious.

A second startling fact revealed by the study was the large proportion of women who had little or no maternal care. Commenting on this section of the report the committee says:

"It is discouraging to find that of the women on whom a report on prenatal care could be obtained and who could reasonably have been expected to have such care, 54 per cent had had no prenatal examination by a physician. In only 1 per cent was the care given up to the standard that it is the right of every patient to have and to demand."

This lack of prenatal care was held a factor in the second largest cause of maternal deaths. Since 30 per cent of the deaths

studied were preceded by some presumably toxic condition, 26 per cent being due to albuminuria and convulsions, special emphasis was placed by the committee on education of the public as to the necessary for prenatal care.

"The chief method of attack against the severe toxemias of pregnancy is conceded to be their early detection and control," they point out.

"Evidence for the value of prenatal care may be found in the fact that smaller proportions of women who died after good prenatal care than of those who died after poor prenatal care died of puerperal albuminuria and convulsions. Further evidence may be found in the larger proportion of live births in those cases in which there had been good prenatal care, and in the fact that those States with more good prenatal care, even among the women who died, had lower death rates from this group of toxemias.

"For the deaths of the women who had no prenatal examination, the attending physician could hardly be held responsible, for he was not consulted until an emergency had arisen. Gross ignorance, carelessness, and sociological and economic problems all had a share in this responsibility," the committee declares.

While the report is distinctly hopeful, since it establishes the fact that the high maternal death rate is due to controllable causes, the Children's Bureau advisory obstetric committee, in a list of recommendations to the medical profession and to the general public, declares that "physicians must assume responsibility for leadership in both the medical and the community program for such control." Both groups are urged to cooperate first of all in making the facts known so that it will be more generally realized that the high death rate of mothers can be prevented, and that every mother must have adequate prenatal, delivery, and postnatal care.

Medical societies and departments of health in co-operation are urged to investigate each maternal death within a few weeks after it occurs. These agencies and the medical schools are also urged to provide or arrange for postgraduate teaching in the various counties in order to keep local practitioners in touch with the best obstetric thought and practice. Further recommendations made by the committee for the medical profession are for larger and better facilities for clinical training in obstetrics and wider contact with obstetric patients for undergraduate students in medical schools.

Greater care by physicians and vital statistics bureaus in making out and accepting death certificates is urged to promote more accurate and valuable statistics.

Recommendations to the general public include judicious selections of the hospital and of the attendant for maternal care. They are likewise urged to support movements for better education for those caring for women during this perid. Communities are called upon to familiarize themselves with the standards for hospitals drawn up by the American College of Surgeons.

"The community has a definite responsibility to provide adequate medical and nursing facilities for the care of women during pregnancy, labor, and the postpartum period. This predicates the proper organization of hospitals, outpatient services, and medical and nursing personnel, and applies to both home and hospital care," the report says.

## THE DIRECTORY

From time to time we have advanced various reasons why one should not neglect payment of his medical dues. Now comes an announcement that furnishes an additional reason—the forthcoming issue of the Directory of the American Medical Association, this to be the thirteenth edition, issued early next year. In passing we may make the comment that another directory will not be issued for at least two years. Those familiar with the directory will recall that all members of our county and state medical societies, as well as of the A. M. A., are properly designated in the directory, their names appearing in bold type. Non-members are listed in smaller type, the classification being such that he who is seeking information about physicians will at once pass over the non-elect. All of which means that former members who have not paid their 1933 dues will find themselves somewhat obscurely catalogued in the 1934 A. M. A. Directory.

## COUNTY SOCIETY DUES

This year it is especially important that you save your County Secretary as much work as possible and the JOURNAL urges you to mail in your dues to both county and state societies today. The State Association is mighty busy these days working for the interest of the public and the profession in Kentucky. We need the united support of the profession during this terrible emergency more than we have ever needed it before. Help your county secretary, not only by paying your dues but by being present at every meeting and taking part in the discussions and settlement of the important problems confronting organized medicine.

## OFFICIAL ANNOUNCEMENTS

### Minutes of the Eighty-third Annual Scientific Session of the Kentucky State Medical Association Held at Murray

September 11, 12, 13, 14, 1933

### FIRST SCIENTIFIC SESSION

Tuesday Morning, September 12

The opening session of the Eighty-Third Annual Meeting of the Kentucky State Medical Association, held in the Auditorium of Murray State Teachers' College, Murray, September 11-14, 1933, was called to order at 10:00 o'clock, Philip F. Barbour, Louisville, President of the Association, presiding.

President Barbour: The Kentucky State Medical Association will come to order.

Let us stand while the Reverend E. B. Motley, Pastor of the First Christian Church of Murray, pronounces the invocation.

Reverend E. B. Motley: Our Father, we thank Thee for this new day and for the joy and blessings and privileges of rich fellowship it is bringing to us. We thank Thee for this gathering in our city of these noble men and women who have dedicated their lives to great constructive service, and we invoke Thy richest blessings upon them. We ask for the leadership of the Great Physician as they come together exchanging ideas and experiences and seeking a new light in the interest of humanity.

May Thy blessing rest upon us today, and throughout the sessions of this Medical Association. We ask Thy blessings and Thy guidance for each one of us in our individual lives as we seek to do service together with Thee in building a new world, a new civilization, a stronger Church and in bringing the reign of Christ, to the end that Thy will may be done on earth as it is done in heaven. We ask it in Jesus' name. Amen.

President Barbour: The address of welcome will be delivered by the Honorable W. Vories Gregory, Mayfield, who has been one of the greatest friends in the House of Congress that the physicians of this state have ever had. He has been pretty close to us doctors, and I am afraid he may say some things that are not very complimentary to us, but at any rate we are in his hands.

#### Address of Welcome

Honorable W. Vories Gregory: I am a member of a very pious organization known as the Benevolent and Protective Order of Elks, and some years ago I was invited to deliver the annual memorial address for that organization at Greenville, Mississippi. Arriving in the splendid little City of Greenville about nine o'clock on a beautiful Sunday morning, I suggested to the reception committee which met me at the station that I preferred to walk to the hotel where I was to be entertained during the day. On the way to the hotel we met a darkey who was on his way to Sunday School. He had with him his two little pickaninnies. The gentlemen who were with me told me this darkey was quite a character around the town, so as he met us I engaged him for a few minutes in conversation.

He was very proud of these two children of his, and I readily discovered that the elder of the two boys with him was his favorite.

I said to him, "Mose, this older boy here seems to be your favorite boy. Will you tell me the reason why? And I would like to know his name."

He said, "Well, boss, you guessed zackly right. Dis boy is mah favor-ite boy, an' his name is Weatherstrip."

I was struck by the unusual name, and I said, "Weatherstrip! How in the world did he ever get this name of Weatherstrip?"

"Boss, dis heah boy was born jus' as de war broke out an' he kep' me outen de draft an' Ah called him Weatherstrip on dat account." (Laughter.)

Now, my friends, I call that appreciation. During all the years that have come and gone since that happy incident, I have cherished the memory of that fine spirit of appreciation shown by this dusky son of the Southland, so I hope I may be pardoned this morning if in the very beginning of these remarks I express my profound sense of gratitude and appreciation for the honor which is mine at this moment.

Some of you may wonder why I have been called upon to deliver this welcome address. Well, first of all, I am an honorary member—Stenographer, get that! *honorary* member, nor *ornery* member—of the Southwest Kentucky Association. These people look upon me as Dave Kincheloe's constituents looked upon him when he first went to Congress. When the Woodmen of the World were having a state convention at Dawson Springs and Dave was to perform the function I am endeavoring to perform now, to deliver the welcoming address, I went out of the Century Hotel with Dave and stopped on the sidewalk to wait a moment for a friend, and we were going to the auditorium to deliver his address. A farmer drove up in a wagon with a mule, and he had a basket of eggs with him. He stopped and said to Dave, "Here, young fellow, I want you to hold this mule while I go over here and sell these eggs to the store."

The gentleman with us attempted to apologize for Dave and explain to the farmer that Dave was scheduled to make an address at

the auditorium just at that moment. He didn't get very far with his statement to the farmer. He said, "Why, sir, this is our Congressman here." But before he could go any further the farmer said, "Well, he looks fairly honest even if he is a Congressman. I'll take a chance on him; he can hold my mule." (Laughter.)

I have been commended and commanded to speak the truth to you. Now the truth may be a stranger somewhat in a convention of doctors, but I assume that at least some of those who are here present this morning will appreciate the truth when I speak it.

We have been taught down here in this country at the knees of our mothers to observe always that old scriptural injunction: "Be not forgetful to entertain strangers, for thereby some have entertained angels unawares." As I look into the faces of these charming women you have brought here with you, I accept the sweet compulsion of the old scriptural injunction without any mental reservation whatever, but having separated the sheep from the goats I want to know what I am going to do about you doctors of the masculine persuasion. You certainly don't come within the terms of this scriptural injunction, first of all because you are not strangers, as I shall subsequently show you, you are near kinsmen of ours, secondly, God knows you are not angels. If anybody doubts that I will bring your wives to the witness stand to prove it. But I have always believed in a rather liberal interpretation of the Scriptures, and liberally interpreting the Scriptures I think you might come within the injunction. If angels are permitted to be entertained royally, why should not the maker of angels likewise be included, and as I look back over the lapse of years I know that you folks more than any other profession have made more angels in heaven than all the preachers, Dr. Motley, and all the other professions in the world. (Laughter.)

For instance, suppose I could walk through the pearly gates this morning, through the jasper walls and down the streets of gold, and I should run into a youthful looking angel who perhaps was a son of wealthy parents while he resided on this mundane sphere, and I should say to him, "Son, how did you get to be an angel?"

"Well, do you know this fellow Dr. Martin from Harlan, who is now the President of the Kentucky State Medical Association, being installed today?"

"Yes, oh yes, I know the Doctor quite well, old friend of mine. I have enjoyed the hospitality of his home at Harlan. He is a good fellow."

"Well, I'll tell you how I happened to be an angel. Some years ago I went out with a lot of other boys in the neighborhood, and we saw a neighbor's orchard, and the green apples were hanging from the boughs of the trees, and as we looked at those apples each one of them was invested with a flavor and an aroma which must have been like that which clung to the cup where Hecuba served nectar to the gods. We leaped the fence and we ate a lot of those apples, and after a while an insurrection and a rebellion arose in my department of the interior and my parents thought someone should be called in to quell the insurrection, so Dr. Martin was called. Doctor looked me over carefully, and after a while he gravely shook his head and said, 'An operation is necessary; it is appendicitis.' So the doctor got out his carving knives, sharpened them up, removed my appendix from my anatomy, took $250 from the purse of my parents, and gave me a through ticket to the realm of bliss and here I am an angel now because of Dr. Martin." (Laughter.)

So I might go all down the line from Martin to Aesculapius and Galen and Paracelsus and all the doctors of ancient times, even Hippocrates, the father of medicine and I am sure that all of them have their representatives up there.

So, gentlemen, as makers of Angels, you come clearly within the scripturel injunction and I welcome you to this splendid city.

I said a moment ago that you were not strangers. I said you were kinsmen, and I think I can prove that, because we are all Kentuckians. Did you ever look at the map of Kentucky, bordered by five magnificent, splendid commonwealths to the North and East and stretching toward the battlefields of the old Volunteer State? There is on the map of the United States a spot that is shaped exactly like a country ham. That spot is Kentucky. Now, my friends, I have been all over that country ham, and it is good from end to end, but as one who knows and as every connoisseur of ham knows, the hock of the ham is always the sweetest part of the ham, and you are down here today, my friends, on the hock of the ham. You are welcome, and I hope you will enjoy the splendid feast of reason and flow of soul that has been prepared for you here. So we are Kentuckians, all of us. And what is it to be a Kentuckian? You folks that have come here from Central Kentucky and way up in the mountains, like my friend Martin, who have never been down here before don't know that we are really Kentuckians down here, and I am going to tell you

some of our characteristics so you will feel at home, Martin, and all the folks who came down here with you.

First of all, down here we believe in religion, horse racing, matrimony, whiskey making and politics, and we practice all we believe down here. We boast very much of our beautiful women and our fine horses, and, like you, we like only our horses to be fast. But I want to make an honest confession to you, we have got a lot of old plugs down here in Western Kentucky, just as bad as those where you come from in Central and Eastern Kentucky. And women? Yes, there are a lot of ugly old gals down here in West Kentucky, almost as ugly as those gals I've seen up in the mountains and in Central Kentucky, but there is one thing about it, we have the same pride in our women and they in themselves that you have in your sections of the state, and on occasions like this all the ugly gals stay at home and are in hiding and none of them are ever present. So we are glad to show you the best there is down here.

The ambition of the boy down here in Western Kentucky first of all is to own a little farm, and when he gets the farm he decides he wants to run for office, and he runs for office and always loses the farm and generally loses the office. But, my friends, the race has its compensations, because after having shaken the hands of and lied to all the men and deceived women about their good cooking and kissed all the babies of the country, the citizen down here naturally becomes a very affable and congenial gentleman. So, my friends, if you see some effusive smiles and some unusually happy handshakes while you are here, remember that we are politicians to the manner born down here in Western Kentucky and we know how the thing is done.

Whiskey making? Well, of course we don't have anything like your mountain dew, but I want to tell you now some of the boys down here tell me that nature has been wonderfully kind to us in giving us a marvelous, a wonderful Golden Pond not far away. But we have the same trouble down here, the boys tell me that you fellows have up in Eastern Kentucky, with the liquor that we produce; just like you, we never have been able to produce a brand that tasted as good coming up as it did going down.

Doctors? Yes, we have got a lot of good doctors down here. I will admit, my friends, that a lot of our doctors can't clearly distinguish the difference between cerebellum and Sierra Nevada, but they don't belong to the Kentucky State Medical Association. All the doctors that belong to this Association are all right or I wouldn't be an honorary member of the Association. They are smart doctors, too, down here. Why, when they take their pre-medical course they don't fool their time away. For instance, in the grammar class, learning how to compare, positive sweet, comparative sweeter, superlative sweetest, Ben Keys over there, when he took his course in grammar in comparison, went something like this: positive, ill; comparative, pill; superlative, bill. So our doctors know a few things down here. And likewise, my friends, they worry us just like you doctors up in Eastern and Central Kentucky do your folks. Long, long years ago those of us who lived down in this section of the country went on in blissful ignorance of the fact that lurking upon everything, everywhere, from love's first honeyed kiss to the skillet of liver and onions, there was a microbe ready to devour and to destroy. We enjoyed those good old days, but along came these educated doctors like Keys and Jones and these other fellows down here, and we have to have the same troubles that the folks in Central and Eastern Kentucky have. So we are kinsmen of yours, we are like you are, and I am sure you will recognize, after I call attention to these characteristics, the fact that we are all Kentuckians, all kinsmen, and all here at home together.

I have spoken to you along these lines, rather foolishly, perhaps you may think, because I was admonished to do that, but I want to say in all seriousness that we are very, very happy to have you down here in Western Kentucky and in this little Athens of the State of Kentucky. We are delighted to have you in our midst. We know that you have come down here upon a mission of service, to better acquaint yourselves with the methods of your profession, to take counsel one with the other, and after all, that you may be of greater service to the people of the great Commonwealth of Kentucky.

My friends, after all, service is the greatest thing in the world. Over in the great district which I have the honor to represent in Congress, there is located one of the great veterans' hospitals. Some four or five years ago it was my privilege to go through this hospital. As I walked through the various wards I saw these soldiers there upon their cots, I looked at their wasting frames, I saw them gasping for breath, and I thought about the hate, the hell and the horror of war. Here were these brave lads who had fought the battles of democracy against autocracy, the right of men against the so-called divine right of kings, for the school and the church against the army fort and the military barracks, for the firesides of civilization

against the blazing torch of war, and I said, "Oh, the hate, the hell, the horror of war! Here are these brave lads ten years after the war is over, still compelled to pass down the pathway which is carpeted with pain and misery and death," and I left that institution with a saddened and depressed heart. As I stepped out in the late October afternoon and looked across the western hills, I saw that autumn had dipped her brush into the sky and had splashed the leaves of the trees with all the colors of the rainbow. The magnetic king of day had wended his way across the sky and was now fast falling to sleep upon clouds of fleecy glory rimmed with purple and with gold. As he did so, he sent his winged messengers of light to plant a good-night kiss upon the tower of the little chapel hard by where the last sad rites had been said above the remains of many a soldier lad. As I stood there, thinking of the scene which I had just witnessed, enraptured and enchanted by the beauty of the vision before my eyes, this thought came to me: But for the service of these brave lads who suffer yonder there would be no land of the free, no home of the brave for me, and I thank God for these boys who served their country and who served us.

And so it is, my friends, with all of us. Service is the greatest thing in all this world. Why, without service there would have been no George Washington, first in war, first in peace, and first in the hearts of his countrymen; without service there would have been no Robert E. Lee, history's most splendid combination of military genius and moral greatness; no Alexander without his arrogance, or Caesar without assassins. Without service there would have been no Abraham Lincoln whose figure is destined to loom larger and larger in the purple perspective of the ages. Without service there would have been no Woodrow Wilson to place America upon that lofty eminence toward which all the world turned its tear-dimmed, weary eyes to behold the radiant forms of truth and justice, freedom and righteousness; and without service there would have been no Harvey, no Jenner, no Lister, no Pasteur, no Mayo, to make life's pathway brighter for those of us who live here. Thank God for all these. Above all, without service there would have been no Great Physician to heal the wounded, to restore health to the sick, sight to blinded eyes, and to cleanse impure hearts.

So, my friends, you come here upon a mission of service, and because of that fact, we welcome you to our hearts and to our homes. We want you to stay with us as long as you may, as long as the money holds out you will be very, very welcome. (Laughter.) I haven't told you, my friends, that the latchstring hangs on the outside of the door. It doesn't because it has been my observation that wherever the latchstring hangs very loosely there isn't a thing on the inside that is worth a continental darn, so I am not going to tell you that. But you have the keys to our cellars and to our homes and to everything we have got when we invite you in. We want you to have a good time while you are here. We are glad you have come, and when you go back to your own places of abode and through length of years and service you have become weary of these earthly joys, it is our prayer, yea, our fervent hope, that when you shall have shaken off this mortal toil and you step out into the great hereafter, there you may be welcomed even as we welcome you now, by the hand of the Great Physician, who shall say to each of you: "Well done, thou good and faithful servant, enter thou into the joy of thy Lord." (Applause.)

PRESIDENT BARBOUR: The response will be given by Dr. George Hendon, of Louisville.

RESPONSE TO ADDRESS OF WELCOME

GEORGE HENDON, Louisville: Ladies and Gentlemen: I know what you all like, but then you know you have to eat sometime. It is too bad to have to descend from the sublime to the practical. I sat there very much enthralled with the superb eloquence of Judge Gregory, and I wished that he would go on and on forever. I enjoy things of that kind with more appreciation than most people that I know.

But I want to say that I am very grateful for the honor and the privilege of acknowledging on behalf of the Kentucky State Medical Association, the warm, elaborate and eloquent welcome that has just been extended to us by Judge Gregory.

I should like to take this occasion to make a few references to the program. Of course, we are glad to be here; that is all understood; we are having the time of our lives during this period that is allotted to us, but there are some practical points that must be properly observed.

Your committee has endeavored to secure representation for all sections alike on the program. Another important object of the committee has been to reveal through this program the talent that has hitherto been held in reserve. In making the program we have selected men who have read papers not since and including the Bowling Green meeting. In that way we have endeavored to meet the undercurrent criticism that certain men are always called upon to read papers. I am very happy to say that our task has been more delicate than it has been arduous.

I should like to take occasion to make some references to the discussions. I think that it is generally conceded that the discussions are the most virile and the most valuable ingredient of our sessions. We all agree that there is about spontaneity a sparkling radiance of warm and natural flavor that arrests attention and captivates imagination of any audience. Therefore, I wouldn't want to suggest it, but I would just like to hint that the usual complimentary references to the essay and the personal panegyrics directed toward the authors could be very well dispensed with in the interest of our search after knowledge, (Applause) thereby allowing us an opportunity to crowd within the limits prescribed all of the discussion that may be possible.

Now what I would suggest on this occasion, if I may be so bold as to do so, is that we follow the example of the boy in the country who slept up in the attic where there was no fire, on cold winter nights. He had been raised, of course, to say his prayers like all of us doctors do before retiring, but it got pretty cold up here along about January, so he hit upon this service. He had the Lord's Prayer printed and pasted it on the head of the bed, and he said, "Lord, them's my sentiments," and jumped into the feathers. Now I believe it would be a good plan if you would adopt the formula, or some substance of it, as understood and taken for granted.

Another point. A discussion, gentlemen, does not imply an endorsement. When you are called upon to discuss a paper you are not bound to endorse what the reader has said. I would like also to present this thought, that a disagreement is not a mark of disrespect to any man whose opinions are entitled to respect. If you have an opinion that is entitled to respect, a man who disagrees with you is paying you a high compliment. If your opinion is not entitled to respect, of course that is another matter.

We can all hark back to those halcyon school boy days when on a Friday afternoon some budding Webster or some embryonic Clay would mount the rostrum and declaim about how freedom shrieked when Kosciusko fell. Now I might with less eloquence but a great deal more truth and propriety remark on this occasion that progress weeps when doctors agree. (Applause.)

INDUCTION OF THE PRESIDENT

PRESIDENT BARBOUR: Two years ago when I was made President-elect of the Kentucky State Medical Association. I asked of you help in my presidency that the Kentucky State Medical Association might go forward in its work. Now that I have come to the end of my term, words fail me to express completely such appreciation of the many kindnesses and courtesies which have been shown to me during my term of office. As I have gone back and forth through the State of Kentucky, I have realized to some extent that I am proud to be the representative of a body of men such as you are. I asked you for help, and I got the finest help that ever came from any group of men to any man.

Now I present this gavel, which has been wielded by so many famous Kentucky doctors, to you, Dr. Martin. we who have labored so unselfishly for the good of our profession, and I pin on you this badge which binds you to an increased service to us and to humanity. (Applause.)

W. M. MARTIN, Harlan: I want to thank the members of the Kentucky State Medical Association for the honor that has been conferred upon me. While I feel my littleness in undertaking the duties of President of what I think is the most wonderful organization in the United States, even including Congress and the Senate, I feel sure, as I told you when I was elected President-elect of this organization, that with the help that I know I am going to get from the members of this organization we can have one of the most prosperous years that we have had in our Association.

I want to say to you before we open the program of the scientific session, that I am not asking for the honors of this program except in one way that possibly I had sense enough to get a No. 1 good program committee which I am sure you are proud of. I am sure there were lots of men in the Kentucky State Medical Association that were able to carry on the duties of this program committee, but it was hard for me to go further for the Chairman of that committee than my friend Dr. Hendon of Louisville. (Applause.) I knew that Dr. Hendon would be able to get up a wonderful program and I knew of his untiring efforts in anything that he might undertake to do.

I want to thank you for this honor, and I assure you that I will do all in my power to make this coming year something of which we can all be proud as Kentucky doctors. (Applause.)

Dr. Ben Keys will make a report for the Committee on Arrangements.

REPORT OF COMMITTEE ON ARRANGEMENTS

BEN B. KEYS, Murray: Mr. President, Ladies and Gentlemen of the Kentucky State Medical Association: We tried in our little City of Murray to make you folks as welcome and as comfortable as we possibly could. The college and all of its faculty here have been very gracious and kind to us and have turned over this state institution to us. Dr. Carr,

the President of the College, and Dr. Broach, who is the Business Manager, have been working untiringly for your comfort and to have everything in readiness for you. I know you will find everything in good shape and in good condition to make you all as happy in your stay as possible.

I want to thank the press for helping us a lot in our arrangements of things. We have had wonderful cooperation. We have had a committee of all of our county doctors and a bunch of the doctors all over this end of the state in Western Kentucky, and they have certainly all been kind and helpful in their suggestions in making this one of the most successful meetings that we have had.

Mr. Lovett has issued an extra edition of our county paper, as some have noticed, and many of you had your pictures in it. I noticed a great array of good-looking men and good-looking women from all over our State.

As our Congressman has welcomed you so graciously, I want to say too that we are happy to have had you come to Murray and we hope that every one of you will enjoy yourselves, stay as long as you can, and we want you to come back to see us again. He mentioned everything, Golden Pond, and so on, and took a general circuitous route, and I think you folks can feel perfectly at home down here; you can get anything you want and have as pleasant a time as you can.

I am very happy to have had a part in trying to make your stay just as pleasant as possible. (Applause.)

President Martin: We will now proceed to our scientific program.

The following papers were presented:

Symposium on Contagious Diseases: (a) Scarlet Fever, by J. Wilbur Armstrong, Berea; discussed by Philip F. Barbour, Louisville. (b) Diphtheria, by R. K. Calloway, Henderson; discussed by J. L. Jones, Louisville; Philip F. Barbour, Louisville; Arthur T. McCormack, Louisville. (c) Anterior Poliomyelitis, by Frank Campbell, Somerset; discussed by J. L. Jones, Louisville; J. H. Pritchett, Louisville.

Five Cardinal Danger Signs in Pediatric Diagnosis, by T. Cook Smith, Louisville; discussed by J. H. Pritchett, Louisville; Philip F. Barbour, Louisville; John W. Scott, Lexington; Virgil Simpson, Louisville; discussion closed by T. Cook Smith.

Early Diagnosis of Tuberculosis, by Paul A. Turner, Louisville.

The Oration in Surgery was given by E.W. Jackson, Paducah, on The Treatment of Perforative Appendicitis with Pathology and Pathological Physiology as the Basis.

The meeting adjourned at 12:30 o'clock.

## SECOND SCIENTIFIC SESSION

### Tuesday Afternoon, September 12

The Second Scientific Session was called to order at 2:00 p. m. by President Martin.

The following papers were presented:

Symposium on The Acute Abdomen: (a) Visceral Perforation, by C. A. Vance, Lexington; (b) Acute Mechanical Intestinal Obstruction, by G. Y. Graves, Bowling Green; (c) Acute Appendicitis, Some Observations on One Hundred Operative Cases, by Guy Aud, Louisville, discussed by C. C. Howard, Glasgow, Wallace Frank, Louisville; J. Duffy Hancock, Louisville; B. J. Dreyfuss, New York City; George Hendon, Louisville; E. A. Stevens, Mayfield; Frank P. Strickler, Louisville; discussion closed by C. A. Vance, G. Y. Graves and Guy Aud.

Traumatic Injuries to the Spine, by Frank P. Strickler, Louisville.

Dislocation and Fractures of the Elbow, by E. C. Walter, Mayfield; discussed by Frank Boyd, Paducah; George Hendon, Louisville; C. A. Vance, Lexington; D. Y. Keith, Louisville; Frank P. Strickler, Louisville; discussion closed by E. C. Walter, Mayfield.

Cancer of the Breast, by Walter O. Bullock, Lexington; discussed by Wallace Frank, Louisville; A. D. Willmoth, Louisville.

Mr. Simon, from the Federal Narcotic Administration, addressed the Association, asking state aid in the control of narcotics.

The meeting adjourned at 5:30 o'clock.

## PUBLIC MEETING

### Tuesday Evening, September 12

At the public meeting, which was held at 8 p. m., Vice President C. W. Hibbitt, Louisville, introduced the President, W. M. Martin, Harlan, who delivered his address on The Art of Living.

Robert Sory, Richmond, presented a paper and a moving picture film illustrating Trachoma Among the White People of the United States.

Collapse Therapy in Tuberculosis was demonstrated by slides and moving pictures presented by Paul A. Turner, Louisville.

The meeting adjourned at 10:45 o'clock.

## THIRD SCIENTIFIC SESSION

### Wednesday Morning, September 13

The Third Scientific Session convened at 9:10 a. m., President Martin presiding.

In an Obstetrical Symposium, the following papers were read: (a) The Tuberculous Pregnant Woman, by J. T. Reddick, Paducah; (b) Immediate Repair of Injuries to the Birth Canal, by James G. Slater and Joseph T. Molony, Covington; (c) Management of Postpartum Infection, by H. A. Davidson, Louisville; discussed by S. P. Oldham, Owensboro; John

W. Scott, Lexington; William Emrich, Louisville; Philip Barbour, Louisville; G. G. Thornton, Lebanon; W. O. Johnson, Louisville; R. C. Burrow, Cunningham; John M. English, Elizabethtown; C. W. Hibbitt, Louisville; James A. Ryan, Covington; discussion closed by J. T. Reddick, James G. Slater, and H. A. Davidson.

The following papers were presented:

Management of Incomplete Abortion, by Thos. K. VanZandt, Louisville; discussed by W. O. Johnson, Louisville; A. D. Willmoth, Louisville; George Hendon, Louisville; E. J. Eversole, Louisville; J. N. Bailey, Paducah; discussion closed by Thos. K. VanZandt.

Hyperemesis Gravidarum, by S. P. Oldham, Owensboro; discussed by George H. Ray, Louisville; J. T. Reddick, Paducah.

Indications for Cesarean Section, by D. P. Hall, Louisville; discussed by J. B. Lukins, Louisville.

The Oration in Medicine, The Hospital as a Community Problem, was delivered by C. C. Turner, Glasgow.

The meeting adjourned at 12:30 p. m.

## FOURTH SCIENTIFIC SESSION

WEDNESDAY AFTERNOON, SEPTEMBER 13

The Fourth Scientific Session was called to order at 2:00 p. m. by President Martin.

SECRETARY MCCORMACK: According to your instructions I sent a telegram to Dr. W. B. McClure, who for many years was Treasurer of this Association, and also was President.

I have this telegram:

Kentucky State Medical Association, Murray, Kentucky.

Thanks for loving message. Missed this one meeting in thirty years. Love to all.

W. B. McClure. (Applause)

The following papers were presented:

Carbon Dioxide Therapy, by John W. Scott, Lexington; discussed by Fred Rankin, Lexington; Leon L. Solomon, Louisville; Virgil Simpson, Louisville; discussion closed by John W. Scott.

Jaundice—Its Cause and Cure, by C. F. Long, Elizabethtown; discussed by D. Y. Keith, Louisville; George Hendon, Louisville; Virgil Simpson, Louisville; George H. Ray, Louisville; discussion closed by C. F. Long.

The Significance of Cardiac Pain, by E. B. Honston, Murray; discussed by Austin Bell, Hopkinsville; E. B. Willingham, Paducah; John W. Scott, Lexington; W. E. Gardner, Louisville; discussion closed by E. B. Honston.

Certain Botanical Remedies Upon Whose Effect Our Fathers Depended and were rarely Disappointed, by Leon L. Solomon, Louisville; discussed by Frank Stites, Louisville; R. C. Burrow, Cunningham; C. G. Thornton, Lebanon; John W. Scott, Lexington; W. M. Martin, Harlan; Leon L. Solomon, Louisville; Arthur T. McCormack, Louisville.

WEDNESDAY EVENING, SEPTEMBER 13

The meeting, following a subscription dinner, was called to order at eight o'clock, President Martin presiding.

PRESIDENT MARTIN: Owing to the failure of my voice, and not only the failure of my voice but the bare fact that I have an old friend, a very old friend, that I would rather have introduce the speakers on this occasion, I am going to turn the chair over to him. I know that most of this audience will think it strange for me even to try to introduce my friend and old preceptor to this audience, Dr. Geore Hendon of Louisville. (Applause)

GEORGE HENDON, Louisville: I am very grateful for Dr. Martin's introduction on account of the fact that I have always looked up to him as a source of guidance and direction, in fact he has assumed the role of an older brother, so I have always felt safe when I was in the sphere of his influence.

I want to speak to you tonight with a great deal of sincerity. I want to tell you in all frankness and sincerity that this occasion marks the culmination of an ambition that I have cherished for many, many years.

I can't tell how far back it was, but it was the occasion of a meeting of the American Medical Association in Boston, Massachusetts, and I was attending the meetings with a great deal of fidelity and regularity. I was afraid to miss any paper on the program because I had spent money on railroad fare and was spending more in hotel bills, and I felt that if I missed a single paper I would have paid for something that I didn't get.

My fidelity and regularity was rewarded beyond my fondest expectations. One number on the program read, "A Method of Treating Abdominal Hernia with the Use of Silver Filigree Wire." In other words, it was to make a bird-cage for the abdomen. This paper was presented by Dr. Willard Bartlett whom we are so fortunate as to have with us this evening. I was so much impressed by the dynamic personality of that individual and by the way in which he made, as we say down South, a sorry cause appear to be the best, that I followed his personality and lost sight of his operation. I followed the career of Dr. Bartlett very meticulously, and I want to say to you that his trail was so broad and so brightly illuminated that it was exactly like tracking an elephant in the

snow. I found no difficulty whatever in medical literature in seeing where Dr. Bartlett had gone along.

I say I followed without difficulty until he began to scale such dizzy heights and reach such lofty altitudes that my imagination and my sense of equilibrium almost forsook me, but I kept up as long as I could, and I have always looked forward to the moment when I might have the privilege of presenting him to a Kentucky audience. That ambition is realized tonight and that hope has reached its fruition, and I take great pleasure in presenting to you Dr. Willard Bartlett of St. Louis. (Applause)

WILLARD BARTLETT, St. Louis: Dr. Hendon, Mr. President, Ladies and Gentlemen: It is well I have this written out because I simply would be unable to express myself after an introduction of that sort if it were not written. I certainly appreciate that introduction: I appreciate it particularly because it comes from my friend Dr. Hendon.

Willard Bartlett, St. Louis, read his address, A Consideration of Four Eras in Medicine as the Basis for a Prophecy.

SECRETARY MCCORMACK: I know every one of you have been tremendously interested in this masterpiece of masterpieces by a great artist, and I know you will be equally interested in hearing from the next speaker the message that comes from his large and practical experience, for no man has been a closer or more accurate observer in this developing era of the particular consideration of the functions of special organs than has this dreamer, this research man, and this great physician.

It is a great pleasure to present to the Kentucky State Medical Association, Dr. Kimball of Cleveland as one of the orators of this, our annual session. (Applause)

Oliver P. Kimball, Cleveland, read his address on Clinical Hypothyroidism.

SECRETARY MCCORMACK: I move you that we extend to the speakers of the evening our appreciation for their appearance here and for thier splendid talks.

The motion was seconded and carried.

PRESIDENT MARTIN: We have with us tonight the President of the Murray State Teachers' College, Dr. Carr. We want to thank him for their hospitality, and want to assure him that we have never had a meeting any place, and I am a long-standing member of the Association, where we have enjoyed things more than we have here. Dr. Carr, we would like to have a few words from you.

DR. CARR: Mr. President, it is too late to make any extended remarks. We are very glad indeed to have had the honor of entertaining this organization.

The School began ten years ago; it will be ten years ago the twenty-fourth of September, and we started with eighty-nine college students, no buildings, and a faculty of five members. The first year of the school was conducted in part of the high school building down in the city. The first building on this campus was donated by the people, that is, they gave the money and the Normal Council built the building, and the other buildings on the campus have been built by appropriations made by the state legislature.

We have from $1.200,000 to $1,500,000 of property.

The college has developed rapidly since the beginning. It is about 120 miles from the nearest senior college. If you will study the location of the colleges of Kentucky you will find that if you take a radius of fifty miles with the City of Nicholasville as the center and draw a circle, you will have eight senior colleges, including the University of Kentucky and Transylvania at Lexington, Georgetown College at Georgetown, Kentucky Wesleyan at Winchester, Eastern State Teachers College at Richmond, Berea a few miles from Richmond in Madison County, Centre at Danville, and Asbury at Asbury a few miles south of Nicholasville; in addition to that you will have two junior colleges in the same area. There are about 39,000 square miles outside of that circle, so you can understand that when you get one hundred and twenty miles away from a college in Kentucky, a senior college, it means that the people are not attending such institutions

This institution has not only grown as far as its physical plant is concerned, but it has developed remarkably well in reference to its standing as a college. We have had between five and six thousand different students during the ten years; we have graduated 567 in that time. Each of the last three classes that we have graduated has averaged more than 100 students.

The school has been a fully accredited college for the last six years, and it has ranked, or does rank, among the senior colleges of Kentucky.

We are very glad indeed to have had you with us and hope you will come again. The college, as you understand, is not in session now or we would not be able to entertain you. The persons that have waited on you, both men and women, are students who have come back a little early, sacrificed part of their vacation, in order that they might be with you.

We have a faculty of about sixty persons at this time. It is a pleasure to hear your words of commendation and to assure you that we shall very gladly welcome you again.

If any of you have any desire to visit any of the buildings, I shall be very glad to have someone show you through. The buildings have all been built within the appropriations and we are very proud indeed that notwithstanding the depression we have all our debts paid. That, of course, is a very fine thing, especially at this time. (Applause)

The meeting adjournd at eleven o'clock.

## FIFTH SCIENTIFIC SESSION

THURSDAY MORNING, SEPTEMBER 14

The meeting convened at 9:30 a. m., President Martin presiding.

The following papers were presented:

Cancer of the Colon, by Fred W. Rankin, Lexington; discussed by W. J. Martin, Louisville; D. B. Harding, Lexington; discussion closed by Fred W. Rankin.

Colitis, by Granville S. Hanes, Louisville; discussed by George Hendon, Louisville; discussion closed by Granville S. Hanes.

The Use of the Rodger Anderson Well-Leg Counter-Traction Splint in Fractures of the Neck of the Femur, by Orville R. Miller, Louisville, discussed by I. A. Arnold, Louisville; R. A. Griswold, Louisville; George Hendon, Louisville; George H. Ray, Louisville; discussion closed by Orville R. Miller.

Primary Carcinoma of the Lung, by D. B. Harding, Lexington.

Acute Suppurative Otitis Media and Its Complications, by C. W. White, Henderson; discussed by H. D. Abell, Paducah; C. F. Long, Elizabethtown; W. B. Atkinson, Campbellsville; Seldon Cohen, Fulton.

Pyloric Stenosis—Plea for Early Diagnosis, by Gant Gaither; discussed by W. M. Martin, Harlan; W. H. Mason, Murray; D. L. Jones, Fulton; C. F. Long, Elizabethtown.

Treatment of Typhoid Fever, by J. F. Dunn, Arlington; discussed by D. L. Jones, Fulton.

Gonorrhea and Its Complications in Women, by E. Dargan Smith, Owensboro; discussed by W. H. Mason, Murray; W. B. Atkinson, Campbellsville; J. Ernest Fox, Lexington.

The meeting adjourned sine die at 1:00 o'clock.

A. T. McCORMACK,
Secretary.

## MINUTES OF THE EIGHTY-THIRD ANNUAL SESSION OF THE HOUSE OF DELEGATES OF THE KENTUCKY STATE MEDICAL ASSOCIATION, HELD AT MURRAY, SEPTEMBER 11-14, 1933

MONDAY AFTERNOON, SEPTEMBER 11, 1933

The first session of the House of Delegates of the Eighty-Third Annual Meeting of the Kentucky State Medical Association, held at Murray State Teachers College, Murray, September 11-14, 1933, convened at 2:00 o'clock, the President, Philip F. Barbour, Louisville, presiding.

PRESIDENT BARBOUR: The House of Delegates will please come to order. The first thing on the program is the report of the Committee on Credentials.

A. W. NICKELL, Louisville: Mr. President and Members of the House of Delegates: We desire to submit herewith a list of the accredited delegates to the State Medical Association Meeting at Murray. We have their credentials on file for reference and observation. Pending that, I move that the roster as compiled be accepted, and where there are delegates who have not presented credentials, their credentials be submitted to our committee to later make the report to this House of the Delegates here assembled.

Respectfully submitted,
A. W. NICKELL, Chairman
I. H. BROWNE,
C. B. VAN ARSDALL.

The motion was seconded, put to a vote and carried.

PRESIDENT BARBOUR: Next is the roll call by the Secretary.

The Secretary, Arthur T. McCormack, Louisville, called the roll.

SECRETARY MCCORMACK: A quorum is present, Mr. President.

PRESIDENT BARBOUR: The next order is the minutes of the 1932 meeting.

W. E. GARDNER, Louisville: Mr. President, I move the reading of the minutes be dispensed with.

The motion was seconded and carried.

PRESIDENT BARBOUR: Report on Scientific Work, W. M. Martin.

SECRETARY MCCORMACK: In order to make the program formal, I move that the program as published be accepted as the program of the Scientific Session.

The motion was seconded.

SECRETARY MCCORMACK: It is important to call your attention to the fact that when that is accepted in the House of Delegates it cannot be changed or suspended in the regular session, that is, you can't ask for extensions of time or anything else under the By-Laws. The time allowed to a man to speak is set and the program is fixed. It is im-

portant that we all understand that and that nobody asks for someone to have another half hour, because it can't be done.

The motion was put to a vote and carried.

PRESIDENT BARBOUR: Report on Arrangements.

BEN B. KEYS, Murray: Mr. President, Ladies and Gentlemen, Friends of mine all the way from the Mississippi River to Big Sandy: I appreciate very much you leaving your business, especially in the eastern part of the state and coming down to Murray. I made quite a scrap to get you to come down to Murray, and I want you to know that I, as well as all the other doctors in West Kentucky, appreciate your coming very much.

Of course, Murray isn't like Louisville, it isn't like Lexington or Paducah and a lot of other larger cities; we don't have very much to do except to come to this medical meeting. We have got the latchstring on the outside, and it is about twenty feet long. We want everyone of you to feel perfectly at home down here, and we want you to enjoy yourselves. We have tried to make every arrangement to make you happy and as comfortable as you can be. We have two dormitories here to house you all, take care of you and feed you. We don't have many sights for you to see, but on Wednesday evening we have our dinner meeting. That is a special program on which doctors from St. Louis and Cleveland are to speak. On Tuesday evening we have a watermelon feast on the grounds. We have made arrangements for you to park your cars in the ball park, and it will be policed.

We want you people to call on any of the Committee on Arrangements down here whenever you want anything or need anything. We are mighty happy to have you folks here. We want you to enjoy yourselves and to let yourselves loose. We have talked to the sheriff and the county judge and the city judge and the policemen, and anything you fellows want to do down here in Murray, just do it, it is just all right.

PRESIDENT BARBOUR: The next order is the President's report. I understand Dr. McCormack has established it as a custom this year, so according to custom I am submitting my report as President of the Kentucky State Medical Association.

These two years have been in many respects the most important in the history of the Association. Chaotic conditions in the world around us have profoundly affected our profession and have called for serious thought and action on our part that we may measure up to the new demands and new opportunities for service to humanity, and for an aggressive leadership by the profession.

It is a part of the President's duty as well as pleasure to visit all sections of the state so that general policies may be presented to the local groups and that there may be a unanimity of thought and action as far as possible throughout the profession in the state. Many county societies have been visited and fine meetings held. The importance of the county units cannot be over-emphasized. They furnish the real framework of this Association. Those counties which have an active, wide-awake society invariably have a more unified profession. I have felt it advisable also to stress the value of the annual meetings of the Kentucky State Medical Association and such publicity resulted in the largest attendance at Louisville that has been recorded in the history of the Association.

I visited and made addresses at Bardstown, Carrollton, Cynthiana and Elizabethtown in 1931. In 1932, I visited and made addresses at Stearns, Hopkinsville, Columbia, Mayfield, Falmouth, Bowling Green, Campsbellsville, Elizabethtown and twice at Lexington. This year I have been to Stanford, Shelbyville, Hopkinsville, Richmond, Paducah, Hodgensville, Huntington, West Virginia, Morehead, London and Cynthiana. I also represented the Association before a Congressional Committee at Washington. I have seen everywhere a renewed and aroused interest in the profession's activities which augurs much good for the future of medicine in our state.

During my incumbency, the Kentucky White House Conference on Child Health and Welfare was re-organized and I was made Chairman of the Medical Division. A general meeting was held at Lexington with an attendance of about 1500. A complete plan of publicity and education has been elaborated. I found that the Congress of Parents and Teachers, the State Federation of Women's Clubs, the Rotary, Kiwanis, Optimist, Lion's and other luncheon clubs, and many other organizations, had been carrying on child health programs for many years. We plan to be of assistance to them in coordinating their programs so as to provide them with the professional leadership that can give them the scientific information they desire that their plans may be practical and definite. With the cooperation of Dr. McCormack I have been able to get all these clubs together on child welfare work, and I believe it is going to be a splendid forward movement in this state.

I wish especially to express my appreciation to the Woman's Auxiliary for its contribution to definite knowledge and public health education upon this subject. It has devoted two of its quarterly supplements to our JOURNAL to this subject and these issues

have received nation-wide recognition and approbation.

Many of you will be drafted to talk to these various organizations in your respective communities. I am sure you will do this well. Kentucky has the high death rate for the first year of seventy-one per 1000 live births. Oregon has a death rate of thirty-four per 1000 live births, and that difference is one that reflects on our profession and one which we ought to set ourselves toward eradicating. This percentage must be lowered and will be lowered if we all get behind it.

Public health education must be led by physicians who are the only ones who possess accurate information of value to teachers and other leaders in the general education of the public. Public health education should be intensified and should be continuous from day to day throughout the year. The plan which we have promulgated has met with the hearty approval of Miss Grace Abbott, the Chief of the Children's Bureau, and of her active assistant, Miss Katherine F. Lenroot, and will be recommended for adoption in other states.

The Committee on the Cost of Medical Care reported the completion of their five years of study and investigation. Coming at a time of great economic distress during which the problem even of existence and sustenance has been paramount, this report unquestionably placed unfair emphasis on many points and conveyed, unintentionally, probably, a wrong impression, but it became front-page stuff in the newspapers. Appreciating the sincerity of their efforts I am convinced that the recommendations of this committee were merely suggestions, many if not most, of which were impracticable and unwise in most sections of our state. The Council of this Association wisely decided to present the matter to the whole profession to provoke local thought and study so that the county societies might devote themselves to a solution of the problems which confront them and their people. After a full day's discussion, which has been presented in the JOURNAL, the Council directed Dr. Irvin Abell and myself to formulate a questionnaire, which was sent to the county societies to provoke discussion of all the conditions and to report back to this House of Delegates. It was ordered that a special meeting be held to discuss this report, and we shall have to arrange for a special meeting sometime to consider it.

Another matter of the greatest concern has been precipitated by the economic depression. Local and individual charities had found themselves overwhelmed by the army of the unemployed added to their previous load of the unfortunate. Cities and counties and finally the states themselves found their resources inadequate to provide for these people who were willing and anxious to work, but who, without fault on their part, were deprived even of the opportunity to earn their daily bread; and it finally became necessary for the Federal Government to set up the Relief Administration. At first this provided food, clothing, fuel and such necessities. It became increasingly evident that medical service and drugs were equally necessary and that in Kentucky and other states the entire burden of medical service for the unemployed was being provided by physicians at their own expense and that in many places where there was no organized medical service for the unfortunate, this burden was becoming greater than could be borne by our profession. This matter was presented to the Federal Relief Administrator and he has authorized an agreement to help finance such county societies as found themselves unable to continue to bear this burden longer. In some counties the profession felt that this matter could be handled according to plans which they had previously devised. In most of the counties, the proposition was gladly accepted and the secretaries of the county societies have submitted to the state relief administration the names of their members who will accept the terms offered. In this whole matter we have preserved the principle that each county society should have the responsibility for medical service within its jurisdiction. It will be noted that the regulations carefully provide for free choice of the physician by the unemployed, and it is emphasized that they should be encouraged to retain the services of their own family physicians. I am confident that this frees this proposal from any suggestion of state control of medical service and I am sure I voice the feeling of the entire profession in the hope that proper social planning will render unnecessary such emergency measures and that we may soon enter a stage of economic sufficiency that will make it unnecessary for the Federal Government to continue to distribute relief funds.

In the discussion of all these matters it seems to me especially important that we be tolerant of other's views. No one of us can understand all the conditions confronting the various sections of our state. The world is passing through unprecedented economic and social storms and we shall not arrive at the correct solution unless we are broad enough to listen to varied opinions.

As all of you know, I have been interested in medical education all my life. In recent years, with the whole-hearted aid of the Medical Department of the University of Louisville, postgraduate courses have been held

each year with a gratifying attendance. This year, on account of the depression, it was thought advisable to omit the course. I have learned since that other similar courses held in other states had been very poorly attended. Long before this, however, I had discussed with Dr. McCormack and others the putting on of an extension course of lectures. The plan, in brief, was to send out a team of an internist and a surgeon to a district meeting. Each man was to speak on three or four different topics with time for questions and discussion. When the plan was presented to the Council it was unanimously approved and two of these meetings have been so held, one at Cynthiana and one at Harrodsburg. I have a number of letters from the doctors who attended these meetings, speaking in the most flattering terms of how they appreciated and valued this new plan. Proper publicity is given through the local office here. A number of the men in Louisville and other cities have agreed to go out on these tours if it meets with the continued approval of this House. I feel, however, that the traveling expenses of these teams should be paid by the Association.

The scheme is quite flexible and it may be possible and advisable to send out teams of pediatricians only or obstetricians or other specialists. This naturally will depend upon your reception of the work.

In concluding this report, which was necessarily lengthy on account of the many important matters discussed, I want to express my sincere thanks for the many helpful suggestions made by Dr. McCormack, for the continued interest and splendid cooperation of the Councilors, and finally my deep appreciation of the loyalty, courtesy, consideration and warm friendship of the profession throughout the state. They have made the arduous duties of the presidency a real and abiding pleasure. (Applause)

The President's report is referred to the Council for such action as they deem wise.

Next is the report of the Council.

REPORT OF THE COUNCIL

C. A. VANCE, Lexington: This report of the Council was acted upon last Sunday at a special meeting in Louisville. We didn't have all of the members there, but I think there were seven out of eleven.

We are very happy to report that the paid membership of the Association, as of this date, is 1,536 as against 1,686 on the same date last year and 1,770 the previous year. These figures indicate the loyalty of the physicians of Kentucky who are in active practice. No other group of our people has had its income more seriously affected by the nation-wide economic situation than the medical profession. When it is considered that practically one-fifth of our population is receiving its sole support from federal and state relief incomes and that another fifth is in the marginal class that is just barely able to escape this situation, it is not difficult to visualize the necessary results on professional incomes. Not only are those directly affected by the depression involved, but all of the stores and factories that ordinarily supply them have had their incomes reduced, so that, too frequently, they are unable to pay for the medical attention which they need. The result has been a reduction in both the demand and the quantity of medical service. Self-respecting families frequently fail to call for a physician when they really need one, and those who do call adopt every expedient for avoiding payment. There are fewer than 2,500 physicians who hold certificates entitling them to practice medicine in Kentucky. Not quite 2,000 of these are in active practice in the state. Most of those who have not been able to pay their dues are constant attendants on meetings of their county societies, and many of them will pay up their delinquent dues as soon as they are able.

There have been more meetings of county societies during the past year than in any previous year. The profession is fully alive to the changing social conditions brought by the National Recovery Act, and in almost every county in the state it is thoughtfully studying the situation with a view to continuing to give the best service possible to our people consistent with the maintenance of professional standards.

In the Annual Number of the JOURNAL, we have published a report of the auditor on the accounts of the Secretary and Treasurer. We have continued to publish these reports in great detail because we feel that every member of the Association and particularly every member of the House of Delegates is entitled to know about the affairs of the organization.

As a going concern we are in excellent shape. Our total assets are $18,502.63 as compared with $20,214.65 last year. The balance in the checking account is $7,883.09 as compared with $7,453.18 last year. The receipts of the JOURNAL were $5,320.59 as contrasted with $8,400.81 last yar. The total cost of the JOURNAL this year was $6,930.26 as compared $8,263.46 last year. The reduction in the income from advertising was $3,080.22 and the reduction in the cost of the JOURNAL was $1,333.20, leaving a deficit of $1,647.02 in the publication of the JOURNAL. This is the third year in the last twenty-eight years in which the JOURNAL has not shown a profit. As compared with other

state journals these figures indicate that we have retained a larger proportion of our advertisers than any other. The wisdom of preceding Houses of Delegates approving the continued policy of the Council of building up a reasonable working surplus is clearly proved by these figures. The JOURNAL has been able to continue to comply with the policy of this House and has published practically all of the articles read before county societies, as well as the scientific proceedings of the sessions of this Association. Some have criticized the Council for continuing this policy. We merit and invite this criticism. The annual volumes of the JOURNAL provide a fair index of the state of medical knowledge in Kentucky and a comparison of the JOURNAL from year to year indicates the increased scientific knowledge of the profession and its increasing ability to serve our people.

For the past nine years the Association has cooperated with the State Board of Health in the enforcement of medical practice and other health laws. The House last year authorized an expenditure not to exceed $1,200 for this purpose. We were fortunate that we were not called on for any expenditure under this appropriation. The Council recommends the appropriation of not to exceed $1,000 for the same purpose next year.

Under our unfortunate and clumsy system of court procedure, the constant changing of county and commonwealth attorneys, elected under our partisan and political system, too frequently results in the election of men who are not sufficiently energetic or interested in law enforcement to effectively enforce the medical and health, or in fact, any of the other laws of the Commonwealth. It is indeed surprising, under such a system, that the majority are such good officers. Realizing, as physicians do, the vital importance of the health and medical laws, it is natural that irritation will frequently arise amongst them, because of failure in their enforcement. In those sections of the state where physicians have joined with other progressive organizations of citizens in the selection of worthwhile attorneys as court officials, there has arisen no complaint. Complaints of evasion of the law come from the poorly organized counties and districts which continue to select these officials as reward for political service or because of the predominating influence of some special interest, and it is apparent that it will be impossible to improve conditions in these sections until public opinion has been educated as to the importance of the selection of competent officials. This year, again, our attorneys have assisted in the preparation of more than eighty-seven cases, and they have been effectively aided by the Commonwealth and County Attorneys in many sections of the state.

The careful and economic management of the Medico-Legal Committee has enabled it to show a reduction in the expense for attorneys' fees as compared with previous years. It was $1,100 this year, $1,129.48 last year, $1,125 in 1931 and $1,025 in 1930. Court costs this year were $59.95 as compared with $19 last year and $190.25 the previous year. The Association has been fortunate in the excellent management of this committee by its Chairman, Dr. J. B. Lukins, for the past several years. The technical control of our cases has been under the splendid supervision of Honorable Roy B. Curtis, our chief counsel. Dr. Lukins' report will go into further detail and will make certain recommendations that will merit attention of the House.

The Council is very happy to report the continuation of the splendid service rendered by the Irvine-McDowell Memorial Hospital for Trachoma, located at Richmond. This excellent institution continues as a living memorial to Ephraim McDowell, the immortal father of ovariotomy. This association, constituted of the physicians of the state, provides the building, which was bequeathed to it by Dr. McDowell's grand-daughter, Mrs. Elizabeth Irvine. The State Board of Health and the United States Public Health Service jointly furnish the personnel and finance the hospital. The profession and people of Kentucky are grateful to the United States Public Health Service and, particularly, to Dr. Sory of the Service, who has so effectively managed it since its opening.

Last year an appropriation of not to exceed $1,200 was made to continue the active work of the Committee on Public Policy. One thousand and eighty dollars of this appropriation has been expended, and Mr. Blackerby will make a report of the excellent work which he has done during the past year. The Council recommends that this appropriation be continued.

The Council wishes again to emphasize the importance of patronage of our advertisers by our members. The value of the JOURNAL to every reader is apparent. This Association guarantees the financial integrity of the advertising columns of the JOURNAL. For these reasons we feel we have a right to ask our members to give our advertisers their patronage, other things being equal.

The Council desires to express its gratitude to the American Medical Association and especially to its Cooperative Medical Advertising Bureau for the splendid work it has done in securing national advertising under most adverse conditions. Under the manage-

ment of Mr. Mattson this bureau of the parent organization has made possible the general excellence of state journals in most of the states.

The Council wishes also to call to the attention of the profession the exhibits at the Annual Meeting. These exhibitors pay the expenses of the Scientific Session. They are carefully selected from among a number of applicants and they exhibit the annual improvements in medical and surgical technic in a very effective way. The exhibit this year, while small, is very valuable and the Council desires to urge those in attendance to carefully study it.

During the year the Committee on the Cost of Medical Care made its report of a five-year study. This report is a valuable reference book in regard to the social trends affecting the practice of medicine. As such, it has been widely distributed amongst our members, and the Council recommends that no action be taken upon it by the State Association, but that it be studied by the county societies as a book of reference and that each of them make such studies and devise such plans as will enable them to best solve the question of medical service for the benefit of their own people. The Council is emphatically and unanimously opposed to any state control of the practice of medicine. It believes that wherever practicable the public should bear its part of the burden of the care of indigent, and unfortunate, retaining for them, however, the free choice of their physicians. At a special meeting the Council considered this report during a full day's session and its discussion has been published in the JOURNAL. As has been its practice, the matter was referred to the county societies for their action.

During the past year the Federal Relief Administration has been paying for the food and clothing for 741,000 unemployed persons and their dependents in Kentucky. The entire burden of medical service to these people has been borne by the profession. The Council felt that this had placed a burden on the general practitioners of the state that was beyond their ability to continue to bear. Together with the executives of many other state associations we made representations to the Federal Relief Administration at Washington, and instructions have been issued by it that a share of this cost should be borne from the relief fund. As in all other similar instances, acceptance of this plan was referred to the several county societies for their action. A large majority of the societies have accepted it, while those who had previously been able to work out a similar or better plan locally decided to continue their own arrangements. A copy of the plan is appended to this report.

The last report, there were eighty-five counties that had accepted the plan, and some of the larger societies had rejected it.

The Council desires to express its appreciation to those counties that have organized Woman's Auxiliaries. It urges every other county to study the reports of this splendid adjunct of the Association and to organize their own Auxiliaries as rapidly as possible. The President of the Auxiliary will report as to its activities during the past year; but the Council particularly desires to call the attention of the members of the Association to, and to congratulate the officers of the Auxiliary on, the publication and maintenance of the quarterly supplement to the JOURNAL. This not only has been published without cost to the Association but it has been possible for these industrious women to secure a sufficient advertising income to pay for every issue promptly. We feel that it is one of the most creditable accomplishments in the extension of medical education in the state. Its pages have given to the women of the profession, as well as our own members, many facts that are important in getting before the public the achievements and responsibilities of the profession. The Council desires to express the hope that the Auxiliary will find itself able to continue the publication of The Quarterly as a supplement to the JOURNAL. The Council recommends that the appropriation of not to exceed $500, to assist in the development of the Auxiliary, be continued next year. The only expenditure that has been made out of this fund is for the ladies' luncheon which is given to the ladies by the Association, so there has not been over $125, or something like that, for each one of them.

The fact that the subscriptions to Hygeia, the public education organ of the American Medical Association, are of great value is proved by the fact that their subscribers in Kentucky have increased in spite of the depression. Ninety per cent of the subscribers are in the counties where there are organized Auxiliaries.

The Council desires to express its gratification to the profession in the several sections of the state in which Dr. J. R. McCord, of Atlanta, conducted his postgraduate courses in obstetrics. Dr. McCord was provided for the State Association without expense to it by the Children's Bureau. It was the privilege of the members of the Council to attend his courses and to come in contact with the other physicians who were present. Dr. McCord's unusual ability as a teacher and leader will, we feel sure, produce a profound effect upon obstetric practices in this state.

Those who have had most experience in the practice of obstetrics were his most constant and appreciative hearers. This form of cooperative postgraduate conference is valuable both to the man who conducts it, because he is able to collect and transmit to others the best practices with which he comes in contact, and to those who attend such conferences because the leader of the course is able to present the best consolidated methods which are of practical value. Along this same line, the President's program for postgraduate work to be conducted for our county societies promises to be of real value; we recommend that the House of Delegates provide for its continuance.

The Council again desires to emphasize the importance of the preservation of the integrity of the organization of the county societies themselves, regardless of the interest that is being developed in Councilor district associations. The increase in value of these Councilor district associations is unquestionable, but it should be remembered that the leaders of the medical profession will always attend medical meetings anywhere because they realize their value. In our type of organization the affairs of each county society should be considered by its own doctors and its meetings should be held within its boundaries so that every physician in the county may have the opportunity of participating in its discussions and in the determination of its policies.

We have had three or four meetings this year of the Council, which is more than we ever had before, and I speak for the Council when I say that they consider themselves a board of directors to run the affairs of the Association in the absence of the House of Delegates, and they are bound to the House of Delegates and everything should be referred back to them. (Applause).

PRESIDENT BARBOUR: The report of the council is referred to the Committee on the Report of the Council.

Next is the Treasurer's report.

MARSHALL MCDOWELL, Cynthiana: The report of the Treasurer is contained in the report of the Auditor in the last issue of the JOURNAL.

SECRETARY MCCORMACK: I move it be referred to the Auditing Committee.

The motion was seconded and carried.

PRESIDENT BARBOUR: Next is the Secretary's report.

REPORT OF THE SECRETARY.

SECRETARY MCCORMACK: Mr. President, Gentlemen of the House: The work of the Secretary's office this year has been particularly interesting and has increased very considerably over any recent year because of the increased activity of the county societies. There have been more meetings of county societies held this year than any year in the last twenty-four years. That is the most encouraging thing that can possibly happen to the medical profession of the state, because the county society is the foundation upon which the whole medical organization is built, and without it, without regular meetings of the county societies, there can be no hope for the development of all those things that the profession can do best for public service and public welfare. I want to take this occasion particularly to emphasize the importance of the county society. The peculiar problems that confront the profession and that confront the public can only be solved by those who are familiar with the local situation and the local set-up. The same solution for our social and economic problems is impossible in all of the counties of the state or in all the states of the Union. There is no panacea that can be applied that would be acceptable everywhere.

There are difficult problems confronting us. The other day in Washington, one of the men who is most responsible for the plans and procedures and legislation which has been adopted since the fourth of last March, said in a conversation with a group at which I was present, that since the fourth of March the greatest social revolution had taken place in human affairs since the eruption of the Aryan race from the Indo-Iranian plateau where they had started on their conquest of the world, and that it was so profound that it would affect the social relationship of every individual now living in the world and of every individual who would be born in the world at any time in the future. That is a tremendous statement, and in a time which is so changing and when such important events are taking place from day to day, it behooves our profession, which is the best trained and the most serviceable of all those which serve mankind, to keep in touch with the various developments and to do its share not only in our own peculiar line, but in helping to educate and lead public opinion so constructively that we will take our part, as men should, in the development of these great plans for the preservation of civilization, which we all know is seriously threatened.

Kentucky has many problems of its own, that are peculiar to it. They are to be solved, if they are solved correctly, by the development of a wise and proper leadership that can secure and maintain the support of the people of our state.

For many years we have been run much like a widow woman's farm, by a group of self-appointed and self-constituted trustees

who had no interest in our welfare or in human welfare at all, and who have selfishly exploited the state for their own profit. That state of affairs will continue just as long as the intelligent citizenship of the state is willing for it to continue, and no longer, and it is important for us sometimes to forget our own personal clan allegiances and even our own partisan allegiances and help to build up in this state an intelligent public opinion that will enable us to produce the results that are necessary if we are to join with the other states in the development of serious plans for the protection of the interests of our own people.

Among the other very large movements that are under way in the Commonwealth at the present time has been the selection of an important group who are known as the Kentucky Educational Commission, and their findings and recommendations have been made public within the last week. I want to recommend that a copy of these recommendations be delivered to our Committee on Public Policy and Legislation, with the request that they make recommendations to the House in regard to them. The teachers are the best allies of the physician, because just in proportion as proper intelligence and proper education are given to our people will they be enabled to differentiate between quackery and charlatanism and scientific medicine, and it is of the utmost importance to us all that our educational system be so revised that the great waste of money and material in it can be properly adjusted to the needs of our children. It is interesting to note that under the perfectly absurd developments of the past fifty years, we have innumerable high schools in many counties, in some of them as many as sixteen and seventeen, where they need one. In many of our counties we have graded school districts in all the districts that are able to support a school, and the poorer sections of the counties find their children consequently neglected. There are hundreds of teachers in Kentucky that make from thirty-five to forty dollars a month as an income. The whole plan of procedure has been built up in a haphazard way and without any definite plan or thought, and it is of tremendous importance to us, not only as citizens and as parents, but as leaders of public opinion that we ally ourselves with those who have a special responsibility in this respect, and help to build up for Kentucky such an educational system as will remove us from the position which we hold as last among the states in education, although we spend almost as much money as many of the others, and will enable us to give an equal opportunity to the childhood of Kentucky for development in this complex civilization in which the man or woman who is not educated is so seriously handicapped, even for unskilled labor.

It seems to me that this Association should ally itself with the other forward-looking bodies in the Commonwealth that are looking to a reform of this situation, which, after all, is basic in connection with all the other things that we desire to see reformed.

It is a matter of great pride, I know, when we stop to think of it, that ours is the only organization that during this economic crisis has not failed. We have seen our banks and our railroads and financial institutions, our great commercial structures, our educational organizations, our city governments, our state governments, all fall down, but during this period of stress when people have gone hungry and naked, without fault on their part, the health of our people has been better than it has ever been before at any period in our history. They have received in as large measure as it was possible for us to give, our services, and we have given them to the limit. I think that the profession at its annual meeting can properly take cognizance of the fact that we have done our part, and we will continue to do our part in the service which we can give to humanity. I believe we have a right to appear before those of our governmental and philanthropic organizations, firm in our faith that in doing this it is not right that we should be penalized by having even our existence and our necessary expenditures curtailed to such an extent that the profession cannot give its greatest usefulness, but that plans should be and must be devised by which professional support will be continued so that we can continue to give this service. It is unthinkable that we can revert from the high standard of medical service which has been developed in the United States to that of many other countries, during this economic depression, where they have almost disappeared. We are threatened with the closing of many of our largest metropolitan hospitals; the services in hundreds of them have been seriously curtailed, and it has been the service of the profession alone, and of its agents and allies and associates, that has been continued unabated.

In closing my report I want to congratulate the members of our profession, especially in Kentucky, but over the United States as a whole, that we have continued as we intended to do, to deliver the goods and to give the best we had to the service of humanity. (Applause)

Mr. President, Miss Myrtle Applegate, the Executive Secretary of the State Board of Nursing Examiners, is present, and I would

like to ask unanimous consent that she be permitted to make a statement to the House at the present time before the individual reports of the Councilors and Delegates are called for, as she will be compelled to leave the meeting. I so move.

The motion was seconded and carried.

Miss Myrtle Applegate, Louisville: I consider it quite a privilege to come in just at this time, because I know that you are anxious to get your own reports over, but I do welcome this opportunity of coming before you. I was very much interested in the statement that Dr. McCormack just made that the medical profession was the only profession that had not failed, and I just wondered what was wrong with the nursing profession.

Secretary McCormack: We count you as belonging to us.

Miss Applegate: I am glad to hear that.

The Board of Nursing Examiners felt that the crisis was such in the nursing profession that we needed to have the help of the medical profession, and that is my purpose in coming before you today, to tell you that we have met and are trying to meet many of the problems that the medical profession has been meeting through this period of depression. We have many problems in our own association that only the nurses themselves can solve, but our purpose in coming before you is this: that many of you are members of boards of trustees of hospitals, many of you own hospitals, and for that reason we felt that you would be sympathetic with us in the effort that we are making at the present time toward raising the standards in the nursing profession.

We wonder sometimes whether we go too far in talking about standards, but in taking stock of our own profession we feel that our standards are very low, and some of the medical profession feel that they are not quite as low as we feel they are and that we should be more hopeful about them. Regardless of whether we agree or not, we feel as a profession that our standards are low. We feel that there is no time just like the present to try to raise those standards.

For a great many years we in nursing education were primarily interested in training a nurse, we thought, to meet the needs of the community in which she was trained. We find that we haven't met those needs. It is probably our own fault, and we are willing to admit it, but we have come to the time when we feel that there should not be a sick person in the State of Kentucky who shall go un-nursed because they cannot afford to have a nurse. That probably has been true during the depression, that many people have gone un-nursed because the nursing profession wasn't organized to take care of those people without being paid, but we hope that in our process of education we can educate our nurses to so meet the needs of the community that no sick person need go un-nursed.

As I said, for a long period of time we were teaching our nurses some surgery and maternity work. I made the statement a year ago that that was all the nurses knew, surgery and obstetrics. I talk to surgeons and they say the nurses are very poor surgical nurses; they say, "You are not training them, you are not giving them the training they should have." I talk to obstetricians and they say the nurses are not getting the training in maternity work that we should give them, and so somewhere along the line we have fallen down in our training, but besides surgery and maternity work, we feel that there are people in the State of Kentucky going un-nursed because we have not trained our student nurses to take care of or to know anything about that particular disease.

There are three services in the state that we feel we must bring up. There are 6,000, roughly speaking, mentally ill patients in our state institutions, and until six months ago there was not a registered graduate nurse in any of those institutions, but through a post-graduate course which we were able to establish in the City Hospital in Louisville, we were able to train a nurse sufficiently to take a position in the institution.

There are three tuberculosis sanatoriums in the state, particularly Waverly Hills in Louisville, that until recently employed forty-two practical nurses. Why? Because we did not give our students in our hospitals any training in tuberculosis, therefore when the nurse graduated they felt that the undergraduate that they had trained out there was much more efficient than the graduate nurse they might employ who had never seen a case of tuberculosis during her training.

Then there is a communicable disease field which only the nurses at the Louisville City Hospital and students who affiliate with that hospital get any training whatever to do. The criticism arises with the medical profession: "I call a nurse on a certain case and she declines to go." Do you blame her? Why should she go and take care of a case of scarlet fever when she never saw a case of scarlet fever in her training? The same thing is true in a mental case. Probably Dr. Gardner has wanted nurses to take care of a mental case, but if a nurse has never seen a case of mental disease in training, what does she know about taking care of a patient like that?

We are asking our hospitals and I am appealing particularly to our small hospitals out in our state who have one or two, sometimes as many as ten or fourteen, students in their hospitals, to come in line with the idea that we are putting forth with our larger hospitals in Louisville and Lexington, that we have an affiliation in tuberculosis at Waverly Hills and in psychiatry at the City Hospital, and also in communicable diseases.

We are sympathetic with you men who have been identified with hospitals, because we know that you have had a hard time financially with hospitals. You say, "Well, all we can do is to run a training school, we can't afford to give that nurse the opportunity to take anywhere from six to eight or twelve months away from her own school to affiliate with a larger hospital in the city," but I think if you think it over and realize that that is the reason that we cannot serve the community, because we haven't been trained to serve it, you will fall in line with the ideas that we have and cooperate.

There is one other service that we have tried to teach particularly in the smaller towns, and that is the RN nursing service. We feel that there again a patient should not go un-nursed because they cannot afford to pay $4 or $5 or $6 a day, but there are nurses in the smaller communities who are trying to establish that service, and for $1.50 or $2 an hour a nurse can be furnished to give the bedside care that a great many patients need who do not need the full services of the nurse.

Those are just some of the plans that we have in mind, and we felt sure that if you knew what we were trying to do, you would make every effort to help us.

PRESIDENT BARBOUR: We are very glad to have heard from the nursing profession. This matter will be referred to the Committee on Miscellaneous Business.

J. W. SCOTT, Lexington: Would it be in order to ask Miss Applegate some questions as to the program for this nursing education?

PRESIDENT BARBOUR: Entirely in order.

J. W. SCOTT: I got the impression that she referred to the small hospitals with one to three or four or perhaps ten or a dozen students, cooperating and having their students take a certain amount of training in the larger hospitals as affiliated students. It was my impression that these small hospitals were being closed. I would just like to ask if the board has changed its program, because I think I am correct in saying that an effort certainly has been made to close these small hospitals that she describes.

I think, too, that it would be interesting to discuss what I take to be Miss Applegate's idea of the training of a nurse, that she should be so well trained that our distinguished surgeons in the larger cities, and perhaps in the smaller ones too, should be able to use all these nurses who take general training as qualified surgical nurses. It seems to me that if any such standard as that is enforced upon the nursing body in general it would be quite impossible for the men in the less densely populated sections to get nursing service at all.

I believe that the whole idea of raising the standards is fraught with a great deal of danger to the nursing profession, and certainly to the medical profession. The idea of raising standards is a very telling sort of slogan, because nobody can say that standards ought not to be raised; standards ought always to be raised, but if standards are raised so high that the nurse has become so sophisticated that her training runs into so much money that a large salary has to be paid her, then the purpose of the nurse is largely defeated in the expense involved in employing her. I think it would be interesting for Miss Applegate to discuss some of those questions before this House if she would be good enough to do so.

MISS APPLEGATE: I didn't mean to leave the impression that we want to train our nurses to be just expert surgical nurses or expert psychiatric nurses or that sort of thing, but to give a general training. We feel that nurses, the same as medical students, should go on for higher education, and if a nurse wants to be an expert surgical nurse she should take a postgraduate course in surgery, but our idea in this general education is to give her a broader training, and then when she comes out of the training school, if she decides to take up tuberculosis or psychiatry or surgery, she would take a postgraduate course. But we haven't the time, Doctor, in three years of training, and they tell us now they haven't even the time to put in tuberculosis and psychiatry, as we are asking them to do, to make experts out of them, and we don't want to leave the impression that that is what we are trying to do, but we do feel that they must have a more general experience if they are to meet the needs of the community and the needs of the medical profession.

J. W. SCOTT: How about the county hospitals?

MISS APPLEGATE: I don't want that impression to get out either, because that has been broadcast from one end of the state to the other, that the present board of nurse examiners wants to close the small hospitals. We do not. We never have wanted to. We

wish there were more small hospitals. But we do want to close the small training schools, the training schools in the small hospitals, for this reason, that they do not have the clinical experience to give the nurses the well-rounded training that we think they should have and that they can have in larger hospitals, and unless they do it by affiliation, which takes them away from their own local hospital for such a long period of time that it is cheaper for the small hospital to employ practical nurses than it is to have a training school with nurses away two-thirds of the time in larger centers, they don't get it at all. Does that answer your question?

J. W. Scott: Mr. President, it does not. As a matter of fact, if I may impose upon your time—

President Barbour: We are all very much interested in this question.

J. W. Scott: If I said close the hospital I inadvertently made an error, because I meant close the training school in the hospital. It is true that many of these smaller hospitals feel that if the training school is closed the hospital is closed, so, after all, that may be in effect closing the hospital, but is it true that the men in Cynthiana, we will say, or the men in Glasgow, or the men in Murray, or the men in any other smaller place, who have a hospital are not competent to teach the nurses in their hospitals to treat the patients according to their desires and their standards? That to me is the crux of the whole thing. It isn't necessary for the nurse to know how, we will say, Dr. John Walker Moore in Louisville desires his medical cases nursed and how Dr. Irvin Abell desires his surgical cases nursed, but if Dr. Howard has a nurse in Glasgow that he can train to nurse his surgical cases satisfactory to him, it seems to me that nurse should be allowed to get her certificate to nurse and should be allowed to serve him as a registered nurse. I think that is the crux of the whole matter, whether it is necessary to have the degree of training that is considered standard and necessary in Louisville when it isn't considered necessary or standard by the men in the smaller places. It does seem to me that they should have the privilege of training nurses according to their own desires and according to their own standards.

Miss Applegate: Doctor, we would be awfully glad to do that. In the small hospitals where they have training schools, the doctors do train their nurses, and we are not saying anything about the training they get, only that you may train your student to meet the needs of your community, but if that nurse cannot be employed there she comes to Jefferson County or some of the larger centers where she hasn't gotten the training to meet the situation, therefore she goes on the unemployed list, and what we are asking is that we give the best training that we can. I think it is impossible to have a standardized rule, but I think in each hospital each nurse should have a certain number of surgical cases, whether she gets them in Cynthiana or in Louisville. We are only asking that she be given the very best training that can be given her so that she can meet the needs, regardless of where she happens to be practicing her profession.

R. Emerson Smith, Henderson: I think that the nursing profession has some difficulties that we fail to realize and I think what has been said here is very true. In Henderson we had a nursing school for nine years, and I happened to be the goat. I was in charge of that nursing school. If there had been an institution a little closer than Hopkinsville I would have been there; eighty miles is too far to go to spend the night. To keep the doctors up with their lecture work, gentlemen, was an awful task. They were busy today and they were busy tomorrow and I could not keep that chart, and when it came to counting up the number of lectures that were necessary and the requisite work to be done it wasn't done. We had three on the staff of eleven that literally filled in the lectures that other doctors were constantly leaving out. I would sometimes go in the laboratory and spend hours, as many as twelve hours a week, making up the difference that was necessary to comply with the state regulations for those nurses.

I don't think our hospital is the best in the state, but we are not ashamed for anybody to come to see it. We kept up with all the state regulations for the nurses' school; we bought a nurses' home, and we kept up with all the regulations until it got top heavy.

Now let me tell you something about a small hospital. We have saved about $4,000 a year by getting rid of our training school, and I know it saved the nervous system of quite a number on that staff. Knowing that that hospital was just exactly like the other smaller hospitals in the State of Kentucky, I believe if we take into account the difficulty of getting the busy practitioner to give those lectures that should be given, and the fact that our nurses should have a regular standard and be required to come up to it, if they can't get it in the smaller hospitals they should by all means affiliate with our larger hospitals where they will get a rounded view of our profession.

I do not agree with these haphazard, hopeless, un-ending standards of individuals scattered all over our state. Kentucky is a

very individual state. I have seven generations buried in Lexington, I guess I can talk about it. We do now realize standardization. Demoralizing as it may be in many ways, we have still got to submit to standardization, and we cannot standardize small hospitals and the training in small hospitals. They do not get their laboratory work in many of our small hospitals. I have seen that, much to my sorrow, with nurses that came in knowing absolutely nothing and were graduated and passed the state examination and still knew nothing about their labortaory work, nothing at all, to say nothing of other conditions.

As far as training a nurse for a surgeon or for an internist or for an obstetrician, that woman hasn't been made yet who could be trained somewhere else; she has got to summit to that particular individual and his peculiarities, and then she is all right. She has to go through that course of training. I don't care where she graduates.

I heard Dr. Deaver once say, "I have never had any nurses yet that anybody could train because I am so peculiar."

T. J. Ray, Lexington: I would like to ask Dr. Smith what laboratory courses his nurses take in his hospital.

R. E. Smith: When you get nurses that can't examine the urine and can't make albumin tests or the sugar test, or when you send them in to get a cover slide and they don't know how to do it, and don't know the oil immersion part of the microscope from the 1-8 or the 1-16 or the 14, they are not very well trained.

President Barbour: If there is no further discussion we will proceed to the reports of the Councilors. This matter is referred to the Committee on Miscellaneous Business.

Report of Councilor, First District

V. A. Stilly, Benton: I regret to report that we have lost about ten of our profession in the last year in my District, but it is very gratifying to report that the remainder have had four meetings in the District, and more in the individual counties than at any times previous. We have a District Society that meets four times a year. We have a sub-district society that meets every two months. In practically every county in the District we have an active county society. It is true that there are not more than eight or ten members, but as a rule they go, and I think the profession as a whole in this depression have been more united this year than at any time previous.

We have a net increase in the membership. You will notice in the auditor's report that it shows three lost, but there have been some paid since that report was made and we have an actual increase in membership in this District this year. I know that is gratifying to every one of us.

The Woman's Auxiliary has functioned in most of the counties. Some of us feel that that has been a great stimulus to the profession over the District, because in a great many instances the doctors' wives would meet for luncheon and the Woman's Auxiliary would meet, and then the county medical society, and we have found that increased the membership.

Taken as a whole, I think that the First Councilor District is in as good or better shape this year than at any time previous.

Report of Councilor, Third District

C. C. Howard, Glasgow: Mr. Chairman, I want to thank this Committee for selecting this place, because I don't believe we have ever had a nicer place to have a meeting. It has been a pleasure to visit this part of the state. If we got nothing else, we would get an education just from visiting each other over the state. This county almost touches the edge of our District, which runs to Cumberland, about 190 miles across the Third District.

I don't know how long I have been Councilor, but I am just beginning to get aequainted with the District, so you can see about how I learn. I think it has taken me about seven years. The roads have helped.

Our District has lost very few doctors in the last year, and we have added a few new ones. There have been added to this District a few recent graduates in medicine during the last year. They are doing very good work, and often are filling a real need. The recent graduate is better trained than the doctor of twenty years ago; he needs time and hard work to teach him the art of how to practice medicine.

There has been a marked increase of typhoid and scarlet fever this year in our District, with quite a few deaths. This goes to prove the value of vaccination and public education, as both these procedures have been sadly neglected during this depression. We as doctors must protect our people through every known agency.

Good roads have brought each home within reach of a doctor; therefore, the young doctor need not locate at the crossroads any more.

I sincerely feel that each boy entering the study of medicine in our District should have a preceptor, as of old.

Public health work has increased in the District, to the credit of the doctor and the public. This is the next great advance in medicine. We must meet the issue and protect these boys and girls. A well conducted

health unit is an asset to the community and the profession.

REPORT OF COUNCILOR, FOURTH DISTRICT

J. I. GREENWELL, New Haven: The Fourth District, like most of the other districts in the state, shows a decrease in membership, but I am happy to state that the decrease in my District is about the same as the others in the state. Most of these have dropped out of the society or failed to pay their dues. I think this is due to the inability to pay, and they will pay their delinquency as soon as they are able.

Most of the counties in my district have an organized medical society which meets two or three times a year, or oftener. We have had two or three District meetings during the year and at each meeting we have had a good attendance. The Muldraugh Hill Medical Society meets three times each year in Elizabethtown, and most of the doctors are members of this society and attend these meetings.

Cost of Medical Care. I find that most of the physicians that I have talked with are in favor of the majority report and are opposed to any group practice, preferring to leave the patient free to choose their own physician and encourage the employing of a regular family physician. Most of the counties have accepted the schedule laid out by the National Recovery Act, thinking that the prices they will receive from this schedule will pay them far more than by charging each individual the regular schedule prices.

I have always aided and assisted the Woman's Auxiliary in every county in my District to organize and maintain an organization, knowing its value since the ladies of Nelson County have been thoroughly organized, in getting behind every movement proposed by the County Medical Society for public health and in aiding and securing better health laws. I am unable to express my appreciation for the pleasure and assistance I have received from the reading of The Quarterly, and I urge them to continue the good work.

REPORT OF COUNCILOR, FIFTH DISTRICT

W. E. GARDNER, Louisville: The Fifth District, as you all know, is composed of Jefferson County and eight counties east and northeast of Jefferson. Our full membership for the District this year is 392 paid up to date. Last year we had a total membership of 415, so we have had a net loss of twenty-three members. Of this loss, twenty-two are from Jefferson County.

This total membership of 392 comprises one-fourth of the entire paid-up membership of the state, so the Councilor of the Fifth District feels considerable responsibility. The Councilor of the Fifth District is accessible to a large number of the profession in Louisville, and he tries to be responsive to questions that arise regarding the practices and policies of the State Association. We have little criticisms here and there; those that are constructive are always listened to patiently; some are sometimes made out of prejudice, which are usually disregarded.

I would like to say, however, that the members of the Council generally have a pretty big responsibility. I think that many of you members probably think that the duty of the Councilor is to wear a red badge at the state medical meetings, the county society and the district society occasionally, but as Dr. Vance has said, the Council is the Executive Committee of the State Medical Association, and between sessions of the House of Delegates it has the power of the House of Delegates. Sometimes emergencies arise and Dr. McCormack calls a meeting of the Council for a special purpose. Things are discussed in much more detail than you realize. Dr. McCormack is always open to constructive criticism. I sometimes think that perhaps the impression is given out, "Well, the Council is simply a rubber stamp for the Secretary of the State Medical Association," but that is not true. In normal times things run along smoothly and very few problems arise out of the ordinary. Occasionally things come up in distressing times when people become restive and dissatisfied in various ways, a sort of defense mechanism, so to speak, criticizing the officers of the Association, but on the whole a very small percentage of those things come to the Council.

I have tried to be responsive, as I have said, to constructive criticism and have tried to get those things before the Council as a whole, and they have usually patiently listened to them and considered them in a fair and just manner.

The Fifth District specifically has gone along about as usual. There is a good feeling among the members of the profession throughout the District. Unfortunately, in several of the counties of the District where there are only a few members, it is practically impossible to have monthly meetings of the county society, even quarterly meetings. We have one society which meets at Carrollton twice a year, in May and November. We have outside of Jefferson, Shelby and Franklin County Societies, which are very active and meet monthly and have interesting programs and good attendance.

It has been a great pleasure to serve as Councilor of this District. I am now completing my ninth year as Councilor. For the first five years of my experience I sat back and listened, but I think as time has gone on we have become more familiar with the

problems that arise, we have become a little bit more outspoken sometimes in our interests, and we made a slight complaint here and there, but in the whole there is a feeling of responsibility to the House of Delegates as a whole that inspires such action. As I say, it has been a great pleasure, and yet, withal, it is a feeling of responsibility greater than the average delegate realizes.

In our meeting a week ago last Sunday, the report of the Council was considered in great detail. Dr. Vance suggested that we have a meeting and take a day to consider this report rather than have a formal meeting for a few minutes and approve the draft of the report before it was presented. I commended him as Chairman of the Council on his interest in calling this meeting, and I am sure that all the members of the Council who attended the meeting feel perfectly satisfied, after having gone over the report and digested the contents and approved of the report as it has been submitted today.

REPORT OF COUNCILOR, TENTH DISTRICT

C. A. VANCE, Lexington: I have the honor to submit herewith the following report of the Tenth Councilor District.

According to the paid-up membership for 1933, the Tenth District has 239 paid-up members. The county society register is as follows:

| County | Members | Non-Members |
|---|---|---|
| Bath | 6 | 4 |
| Bourbon | 15 | 7 |
| Breathitt | 7 | 0 |
| Clark | 19 | 3 |
| Estill | 6 | 1 |
| Fayette | 105 | 28 |
| Jessamine | 11 | 5 |
| Lee | 2 | 2 |
| Madison | 30 | 7 |
| Menifee | 1 | 1 |
| Montgomery | 9 | 3 |
| Morgan | 2 | 8 |
| Powell | 3 | 2 |
| Rowan | 2 | 2 |
| Scott | 12 | 1 |
| Wolfe | 2 | 1 |
| Woodford | 7 | 3 |
| Total | 239 | 78 |

This register shows that we have exactly the same number of paid-up members that we had last year. It also shows that in addition to the 239 paid-up members, there are 78 non-members residing in these counties. Possibly there are fifteen or twenty eligible non-members and some of these have never been members of their county societies. We have tried to get them enrolled but have not been successful and this year especially I have made trips to see all of the secretaries of the county societies and have attempted to assist them in getting these men enrolled. Some of the dues I have collected myself and turned over to the secretaries. A few of the old members have not yet paid their dues, but I have promises from a number of them and before the year 1933 is out I believe we will have a few more paid-up members than we had last year.

Bath, Breathitt, Estill, Jessamine, Lee, Menifee, Montgomery, Morgan, Powell, Rowan, Wolfe and Woodford County Societies hold occasional meetings.

Bourbon, Clark, Fayette, Madison and Scott hold regular monthly meetings, and these are all well attended and usually have fine programs.

The Fayette County Society has the largest enrollment in its history and the meetings have been interesting and instructive and each one has been attended by a large number of doctors, and many of the doctors in the adjoining counties have come in for these meetings.

The Madison County Society has held up well in their attendance and programs and still continues to be one of our very best societies.

The Breathitt Society has all eligible doctors as paid-up members, and I wish to congratulate them in this report to the House of Delegates.

The Madison County Society and Clark Society have had several joint meetings this year, and the Woodford and Scott County Societies have done the same thing, and there is a movement on foot in Bath, Montgomery and Menifee Counties to have joint meetings, and there has been considerable enthusiasm among the members about these meetings. Joint meetings of nearby societies may be a solution to keep these members interested and hold larger and more enthusiastic meetings than a small county society would do by itself. I believe this is, perhaps, a step in the right direction, although I am still very much of the opinion that a well-organized, enthusiastic county society in each county is very much better for the state society as a whole than a smaller number of district societies. The doctor who is sold on going to medical societies will attend nearly every one within his reach, but he will be much more enthusiastic about his own local society.

During the last year I have not heard of any malpractice suits being brought to court against any of our members in the Tenth District. The profession generally shows great loyalty and interest in the State Association and also in the matter of electing the right men to the legislature.

I would again urge that each county so-

ciety select the best man available for secretary. It makes no difference to a society what kind of a president or other officers they have, but the secretary is the most important officer of any society, and if he is an efficient and popular one that society is prosperous and enthusiastic.

REPORT OF COUNCILOR, ELEVENTH DISTRICT

H. K. BUTTERMORE, Liggett: Mr. President and Gentlemen: On May 23, 1933, the Kentucky River Valley Public Health Association, made up of the county health officers and public health nurses of ten counties in Southeastern Kentucky, was reorganized. The counties were Perry, Letcher, Wolfe, Lee, Breathitt, Owsley, Knott, Leslie, Powell and Harlan. The meeting was called by Dr. Jenson, Assistant Director of the Bureau of County Health Work of the State Board of Health. An interesting program of several papers and two illustrated lectures was given between ten and twelve a. m. The afternoon was given up to the discussion group, in which common problems which constantly confront every health officer were discussed.

The Cumberland Valley Medical Society, made up of the physicians from Harlan, Bell, Whitley, Laurel and Knox Counties, met at Harlan in December, and at London, Kentucky on June 22, and held a very interesting scientific program.

Dr. McCord, Professor of Obstetrics, of Emory University at Atlanta, Georgia, has given several very interesting lectures on obstetrics throughout my District during the past year.

We have had a net loss of five members during the past year.

PRESIDENT BARBOUR: Next we will have the reports of the delegates by counties.

BARREN COUNTY

P. S. YORK: Barren County has a paid-up membership of sixteen and meets monthly. The relationship between the doctors and the laity is such that we have no malpractice suits in Barren County, and we particularly wish to endorse the work of the County Health Department under the able guidance of its full-time health officer. This has done much in education of the laity and has made the relationship between doctors and patients much better than under the old conditions. We have had no deaths. We have had one addition to our membership, one that has returned paid. The only unfavorable report we have to make is that we have no Woman's Auxiliary in Barren County. We hope that will be rectified by the time of the next report in 1934.

BOYD COUNTY

J. D. WILLIAMS, Ashland: Six meetings have been held up to and including July 17, the beginning of the summer vacation period, two of these being special meetings. There are thirty-five dues paying, hence active, members, and we feel that the society is in a flourishing condition. The visits of Drs. McCord and Barbour were interesting and much appreciated. The lectures of Dr. McCord August 7th to 11th were most favorably received and our thanks are due the state society for his coming.

BREATHITT COUNTY

O. M. GOODLOE, Jackson: Breathitt County Medical Society after sleeping something like six months, woke up in the spring and we have had regular meetings ever since. We lost one member who moved away, and gained two who moved in, and they are all paid up 100 per cent. We had one pleasant visit from Dr. Vance. We are sorry we have no Woman's Auxiliary, but there will be one soon, I think.

BUTLER COUNTY

C. T. THRELKEL, Morgantown: Unfortunately we haven't very many doctors in our county. To make a medical society function properly we should have more doctors. We have tried to fall in line in the way of helping those who needed help during the depression. Our doctors have been very loyal. They have been loyal along all lines and have made sacrifices. We meet quite a bit with the Third District society that meets at Bowling Green, and we have practically made that our society instead of having a Butler County Society. We still try to keep our society on the map, but with as few doctors as there are in our county and since we are considerable distance apart, it throws quite a bit of work on us to keep it functioning properly; that is why we prefer to meet with the society at Bowling Green.

CALLOWAY COUNTY

E. D. COVINGTON, Murray: We have fifteen paid-up members. That comprises all in the county. We meet about three or four times a year here in Murray; that is the local society. The annual meeting was held February 7, 1933, with most of the members present. Only a short scientific program was provided as it was the annual meeting.

Dr. Keys presented a very interesting paper on Pulmonary Edema. The paper was of vital interest to every member because of unsatisfactory and shocking results experienced by many of the doctors of the county.

Dr. J. A. Outland discussed obstetrics from the prenatal standpoint. The discussion was interesting and general, everyone recognizing the proper care of the pregnant

woman in reducing the mortality of mother and child. Every doctor agrees that the doctors of Calloway are interested and are not negligent in this work.

Calloway having joined the Four-County Society with Graves, Hickman and Fulton counties, we often give way in our regular meeting to attend the Four-County meeting instead.

The June meeting of the society was well attended and very interesting.

On a request from the State Medical Society, the County Society elected a Committee on Medical Ethics as follows: W. H. Graves, E. D. Covington and W. F. Grubbs.

E. D. Covington was elected delegate to the State Meeting and was instructed to present to the meeting Calloway's opinion and stand on the report on the Cost of Medical Care. E. B. Houston and C. H. Jones were appointed to assist in preparing this report.

Drs. Houston and Keys were appointed to draft proper resolutions upon the death of G. H. Covington and E. R. Blalock, the resolutions to be presented to the society and spread on its books and a copy sent to each family.

W. H. Mason presented a paper on Injection of Varicose Veins. The paper was discussed by Dr. R. M. Mason. The paper proved to be both interesting and instructive.

The July meeting held on the 13th was well attended and every member agreed to accept the proposition of the NRA for remuneration in attending charity patients, as presented by the state society, provided the patients were bona fide charity patients and so reported and recorded by the county board.

The August meeting was held to prepare and arrange for the State Meeting in September.

We have an Auxiliary, which is in fine working order.

CAMPBELL-KENTON COUNTY

C. W. SHAW, Alexandria: In carrying out its activities the society has completed a rather successful year. It has been a custom to make out a stated program at the beginning of each year. This year's program included papers from both visiting doctors and its own members, and without exception this program was carried out with a very good attendance.

The society meets bi-monthly, the first Thursday in Kenton County, the third Thursday in Campbell. The society held two extra meetings during the year, one to consider the report on the Cost of Medical Care, the other the stipend allowed by the relief for the care of the indigent.

At the meeting on the Cost of Medical Care the membership were very much at a loss as to what to do about it, but it did go on record as favoring the report of the minority findings in the report of the Committee as being the more reasonable. It also pledged its membership to go on record as opposing any further encroachments on the prerogatives and privileges of the medical profession, and to resist all efforts that shall be hereafter made toward state medicine.

At the meeting for the relief of the indigent the plan recommended by the State Medical Society was not approved; however, it can be reported that due to the cooperation of the profession, the hospitals, and the various fiscal agencies, no truly indigent person has been refused or has failed to receive the excellent medical or surgical care that the profession has always furnished to those more unfortunately situated.

It has been the good fortune of the society to have one of the eight District meetings in Campbell County. This meeting was very enjoyable and instructive.

In cooperation with the maternal and child welfare department, Dr. McCord held an excellent series of lectures on obstetrics, with a very good attendance both of the society's members and other physicians of our counties and surrounding counties.

The Woman's Auxiliary has an active society which meets the first Thursday of each month. Too much cannot be said for the excellent work done by these wives, widows and daughters of our doctors.

The society membership comprises about sixty-five per cent of the medical profession. During the year we have had a few additions to the number, but more subtractions from it. The membership at present is ninety-three paid-up members.

The society lost two of its members through death, Dr. George Hermann, of Newport, who passed away earlier in the year, being one. Dr. Hermann was a member of the society for many years, having practiced medicine almost forty years. He was a citizen of high standing and a physician of unusual ability. He held the respect and friendship of the entire profession.

Dr. James G. Furnish, of Erlanger, was a senior member of the society, the oldest of its doctors. He was a man of many attainments. He devoted time to every activity in life that would do good. He was a man beloved by many and respected by all. The society has lost much by the death of these two members.

CARLISLE COUNTY

J. F. DUNN, Arlington: Our county is

very small. About ten years ago we had fifteen doctors all in practice and belonging to the society. We had one of the most active societies in the state, I think. It is still active, but there are only five in the county in active practice now.

In the county to the north of us, Ballard County, their number has been reduced to a very small number, so we decided to continue our two county societies but to have the meetings at the same time and place as joint meetings. We have had some very interesting meetings every two months. Everything is getting along nicely. There is a very small number to combine, but we still keep our home society and have a delegate to the Association.

We have gone through the depression very nicely. The five doctors have taken care of the work and no one has suffered for a doctor that I know of. Quite a number of them have suffered because of a doctor (laughter), but we couldn't help that.

The people have been very much worried because they couldn't pay their bills. A short time ago all five of the doctors slipped off to the World's Fair in Chicago, and since that they have quit trying to pay their bills.

The work is very interesting. We have not lost any doctors in the last few years. Everybody is in active practice, they are all in harmony with each other and in harmony with the people.

### Carter County

J. W. Stovall, Grayson: Carter County has twelve active practicing physicians, one retired physician, and a full-time county health officer. Of this number, only five are active members of the county medical society, as compared with seven last year.

The officers of the society are: H. T. Sparks, Olive Hill, President; R. G. Townsend, Grayson, Secretary.

The society has a regular or called meeting approximately every quarter. Besides the regular business, usually professional and medical topics of interest are discussed.

### Christian County

M. A. Gilmore, Hopkinsville: The Christian County Medical Society has a roster of thirty active members. There are nine physicians in the county who are not members of the society, three of them not being in practice at the present time. During the past year there have been two new physicians enter upon the practice of medicine in Christian County. One former non-member has been added to active membership. Four members have been lost during the past year, one has moved, one has retired, one has not paid the annual dues, and the fourth was lost by death. This latter member was R. L. Woodard, of Hopkinsville, long prominent in medical circles in the State of Kentucky, former president of the Christian County Medical Society. His death was a distinct loss to the organization.

The society holds regular monthly meetings. During the past year the average attendance at these monthly meetings has been thirty-four. We are very fortunate in having with us at such times many men from surrounding counties. In addition to the regular meetings for scientific purposes, two social meetings have been held, which have proved invaluable in the promotion of fellowship. The programs of scientific papers presented at the society meetings have been graciously presented by out-of-town men almost exclusively. In criticism I might say that our own men have failed us largely in this respect.

With the cooperation of the State Board of Health an intensive series of lectures in obstetrics was presented by Dr. McCord, of Atlanta, Georgia. This proved very valuable not only to our own members, but was well attended by those from the surrounding counties. The society wishes to take the opportunity to again express its appreciation to the members of the State Board of Health and to Dr. McCormack for making this possible.

The members of the society are intensely interested in the solution of certain problems surrounding the development of the practice of medicine today. No definite, concrete plan has been evolved for the solution of these problems, yet the following things have been accomplished. The society has, with the help of the management of Jennie Stuart Memorial Hospital at Hopkinsville, maintained a hospital sufficient for the needs of our people. It has been kept modern and efficient. A training school for the training nurses has been maintained. During the past year there have been seven nurses graduated, and at the present time there are eighteen girls in training. The teaching staff of this hospital is provided by the members of the society, and I believe that they are all very diligent in their teaching. Graduates of our school have proved to be well grounded from a didactic standpoint and thoroughly trained in the practical requirements for an efficient nurse. They are today well serving the needs of our people and to a certain extent those of surrounding counties.

The financial condition of our people is not what could be desired, and yet for that reason their medical care has not suffered. We do not have an organized health unit. We do have an organized pre-school clinic, and regular school examinations provided by the members of our society. In cooperation with the parent-teachers' organization, we have

provided attention to our children's eyes, and education along the lines of building sounder bodies. The same group has also provided needed surgical attention to many children. Each and every doctor in the county has given freely of his time and facilities toward the care of indigent, not only residents of the county but also transients. The society has instructed me to state that no one in Christian County has suffered from lack of medical or surgical attention because they were unable to pay for it.

While we have accomplished many things, nevertheless in one respect we have been sadly lacking. We have not sponsored a Woman's Auxiliary. We have failed to avail ourselves of the tremendous advantages which such a body would give us. When we report to this body next year we hope to have corrected this matter to our satisfaction.

SECRETARY MCCORMACK: Mr. President, I want especially to call your attention to this very excellent report presented by the Secretary of the County Society. Dr. Gilmore has made that society one of the very best in the State of Kentucky. There is no society which has held more regular meetings or which has given better or finer service to the people of the state, and I know every one of us here must enjoy hearing a report from a man we hope will be the Secretary of his County Society as long as Dr. Reddick has been, and in the same class.

I would like to move you that a committee consisting of Dr. Stewart, Dr. Gilmore and Dr. Reddick, be appointed to draft resolutions in regard to the death of Dr. Woodard.

The motion was seconded and carried.

PRESIDENT BARBOUR: The committee is so appointed.

### CLARK COUNTY

ISAAC H. BROWNE, Winchester: Old Clark County Medical Society has had one of the most successful years of its fifty-four years of existence. Our membership has been 100 per cent. We regret to say that during the year we lost one of our oldest and most esteemed members by death, Dr. Benjamin Franklin Johnson.

During the entire year we have held meetings every month, preceded by a dinner at the Brown-Proctoria Hotel. The attendance has been excellent and the programs for these meetings have been exceedingly interesting and instructive and have been furnished almost entirely by our own membership, two programs being presented by out-of-town speakers during the year.

We are trying out a new plan of swapping programs with some neighboring county society. Madison County Society came over in June and put on a very interesting and instructive program for us, and we are going to return it at the September meeting.

Our Councilor, Charles A. Vance, has been with us a number of times during the year. The best of fellowship has existed among our members, and we are working together for the betterment of the profession and that the National Recovery Act goes over big.

SECRETARY MCCORMACK: I want to call your attention to the fact that Dr. Browne has been the Secretary of his county society since, I think, 1907, and his efficiency in presenting that report is a demonstration of the efficiency of that county society.

### DAVIESS COUNTY

P. D. GILLIM, Owensboro: Mr. President and Fellow-Delegates: In my report I have incorporated in no uncertain terms the expression of our society in connection with the cost of medical care. I have given it very tersely, and while I understood you to say that there would be a special meeting of the House of Delegates to discuss that matter, since it is incorporated in this terse report of mine I shall give it now, if there is no objection.

The Daviess County Medical Society extends greetings to the delegates of the Kentucky Medical Association and submits the following brief report of its activities during the past year. Our society, which has thirty-four members, has continued to meet semi-monthly with full programs.

We have been fortunate in having an out-of-town guest speaker of prominence for one meeting each month, and it is our purpose to continue this practice during the coming year. We extend a cordial invitation to physicians of neighboring societies to attend our meetings.

The Daviess County Medical Society has taken an active interest in the much-discussed subject of the cost of Medical Care. We have manifested alarm over the favorable reception accorded revolutionary fallacies by politically minded minorities in our profession. We do not want the medical profession used as an opening wedge in foisting socialistic practice. If economic conditions warrant radical experimentation with civilization, it seems logical they should begin with the three major necessities of existence: food, raiment and shelter.

We call your attention to the following resolutions which were unanimously adopted by the Daviess County Medical Society and which appeared in the June 1933 issue of the Kentucky Medical Journal:

"WHEREAS, It has come to the attention of the medical profession throughout the United States that a committee was appointed to determine the Cost of Medical Care, and that after five years of deliberation and medi-

tation has presented both a majority and minority report, and,

"WHEREAS, Your committee, after thorough investigation and study of both reports, wishes to go on record as opposing the majority report, for the following reasons:

"1. That the abolition of private practice in this country would invite a bureaucracy which would prove deadly and disastrous in its effect and create a state of bolshevism.

"2. The majority report whose purpose it is to abolish private practice, seems to us to be propaganda for socialism and public health officials whose activities at present are leading toward the socialization of medicine.

"3. We believe the majority report has presented this entire question in a distorted manner, that the evils of contract practice are widespread and pernicious, that any method of furnishing medical care which degrades the medical profession through unfair competition or inadequate compensation, or which has a tendency to break down its ethical standards or furnish inferior medical service, should be condemned.

"4. That we are of the opinion that the majority report has shown nothing by experience that would have a tendency to prove its theory as workable, or that it would not contain evils of its own which would be worse than those it is supposed to eliminate.

"5. We believe that such economic problems as may arise from time to time can at least be solved by an alert, but considerate medical profession."

The load of charity work which the medical profession has carried so long should be a guarantee to the public of our understanding and sympathy.

We do object to the exploitation of our profession by lay organizations and by Utopian reformers in our profession who have not experienced the vicissitudes of active practice.

### FAYETTE COUNTY

T. J. RAY, Lexington: "Active members, 104. This represents an increase of four over 1932.

"Meetings have been held monthly and the scientific programs have been of such interest as to insure an unusually good attendance by the members."

I would like to say that Fayette County produces its own programs. It has no outsiders.

"In June the society in cooperation with the State Board of Health sponsored a postgraduate course in obstetrics, given by Dr. McCord from Emory University.

"The individual efforts of Dr. L. C. Redmon added greatly to the success of this, which was well attended by physicians from nearby counties as well as from Fayette.

"(Signed) John Harvey, Secretary."

SECRETARY MCCORMACK: Mr. President, a very interesting thing happened with relation to Fayette County that I think the rest of the state will be interested in. At the request of the City Manager of Lexington, a survey of the health facilities and medical service of Fayette County was made by a representative of the United States Public Health Service and personally conducted by Dr. L. L. Lumsden, Senior Surgeon of that service. Dr. Lumsden is probably the most experienced member of the Public Health Service in the survey of county and state health work and medical service. He has been engaged in this particular activity as the specialist representing the service since 1904, and it was of particular interest that he said in his report that this was the first time he had ever felt called upon to specify and make a particular statement in regard to the wisdom and fineness of the leadership and the splendid service that was being rendered by the entire personnel of the County Society in regard to leadership in all of the diverse activities in the county. It was, he believed, the finest medical profession that he had come in contact with in his entire experience.

I know every doctor in Kentucky will take a great deal of pride in that report, and the doctors of Fayette County will receive it with the modesty that is characteristic of them. (Applause).

Mr. President, this is the first meeting of the State Association since Dr. Redmon graduated in medicine that he has not attended as a delegate from the Fayette County Medical Society. His absence this time is caused by illness. I would like to move that the President and Secretary be directed to send a telegram to Dr. Redmon expressing our regret at his inability to be present and hoping that he will be with us in the future.

The motion was seconded and carried.

SECRETARY MCCORMACK: I would like to make the same motion with reference to Dr. S. C. Smith, the Councilor for the Ninth District.

The motion was seconded, put to a vote and carried.

### FLEMING COUNTY

J. B. O'BANNON, Flemingsburg: Fleming County is made up of thirteen members. Eleven of these members are paid up in full. We have lost a member, but we have gained one.

We meet regularly the second Wednesday in every second month. We always have a quorum. The men are loyal to the Kentucky State Medical Association. Their discussions are generally case reports. We have very few

scientific papers or textbook papers.

FRANKLIN COUNTY

F. M. TRAVIS, Frankfort: The Franklin County Society has twenty-five physicians. Twenty-three of them are white and two colored. Sixteen of the twenty-three are members in good standing of our county society. Of the remaining seven, four have been members of the society in the past and three have never been members.

The County Medical Society meets on the second Thursday in each month, twelve o'clock noon, at the Capital Hotel, with the exception of the three hot months of summer weather. After our program the society is served with lunch. The members of the society are arranged alphabetically and each furnishes a program at his appointed time.

During the past year Dr. Frank Stites of Louisville gave the society a very interesting paper on The Mucine Treatment of Peptic Ulcer. He was accompanied by Dr. Wallace Frank who discussed his paper from the surgical standpoint. Dr. E. S. Maxwell of Lexington gave the society demonstrations of Nephritis, with lantern slides, which was most interesting. J. G. Leaser, technician at our hospital, appeared on the program with a paper on Laboratory Diagnosis. Colonel Robert Dixon, member of the Workmen's Compensation Board, gave a discussion before the society with reference to the Physicians and the Workmen's Compensation Act.

During the year we have had a number of physicians who have visited us, put on the program; the remainder of the time we have furnished the programs from among physicians in the society.

We have not failed to have a meeting of the society during the past year, and we have had an interesting program at each meeting. Our percentage of attendance has been unusually good.

The congeniality that exists among the physicians in our county is not to be surpassed.

GARRARD COUNTY

J. E. EDWARDS, Lancaster: The Garrard County Medical Society has six paid-up members. We have had one meeting, a called meeting, this year, on account of the inability of our Secretary, Dr. J. B. Kinnard, who is an invalid, to attend the meetings we have become rather lax in our attendance. Two of our doctors are invalids. Another is at the present time sick. I believe we have one doctor in the county who is not a member. We have had an addition to our doctors in the county recently, Dr. Kayworth, who I am sure the members of the State Medical Society will welcome.

FULTON COUNTY

L. F. BRESHARDT: I am not the delegate from Fulton County, but as he was unable to attend he asked me to represent him. I am the secretary of the county medical society and I do happen to know a little bit about it. There are seventeen doctors in the county. Ten of these are active members of the Kentucky State Medical Association.

Our society meets twelve times a year. We usually alternate between Fulton and Hickman. We try to have one paper each meeting night. We bring up any type of case that is difficult. We bring up the cases that we miss in diagnosis and also the ones that are easy of diagnosis.

We have one addition to the county, and we have had one death in the past year, Dr. Lind.

GRANT COUNTY

N. H. ELLIS: We give a report to the JOURNAL every month. Our secretary, Dr. C. A. Eckler, is the moving figure in keeping our society 100 per cent, and I believe he is one of the best secretaries in the state. He writes a good report and tells the truth about it. Our society meets on the third Wednesday in each month, and we have good meetings. Occasionally our program committee has some visiting physician give a paper on some subject of interest. We are 100 per cent members of the society, or we were the first of the year. One doctor has moved in since the first of the year and hasn't come in with us yet, but it is assumed he possibly will.

Harmony reigns within our ranks.

Our society adopted unanimously the code recommended by the Relief Commission and is only anxiously waiting for the commission to put it into effect.

SECRETARY MCCORMACK: The representative from the next county is a very modest man indeed. He has been secretary since about the time of the Civil War. He is probably the most active man in the medical profession in the State of Kentucky in every repect. He is like most doctors, he picked a very excellent wife. He is very popular with the members in this end of the state and they all deplore his extreme timidity, but they have asked me to present him to you in this way so you will know just exactly the kind and character of man he is and won't be surprised if his voice is a little low and he is a little backward in telling about the good deeds that have been done in Graves County. H. H. Hunt, of Mayfield.

GRAVES COUNTY

H. H. HUNT, Mayfield: Mr. President and Fellow-Doctors: Graves County is one of the largest counties in the State of Kentucky. It

has the best society in the state. We have twenty-three live doctors. We have lost two by death.

One of our greatest activities this year is a free clinic which we give every Wednesday to the poor people or those who desire it, inoculating people against typhoid fever. We have immunized about 500 persons. We make inspection of our schools once a year. We visited the West Ward School and made an inspection and examination of about 400 school children and reports were mailed to the parents of the defective children.

From time to time we get small articles in the daily paper relative to prevention of diseases and to sanitation. We also see that articles put out by the Board of Health are given a good space in our papers. We believe by doing this we get a greater publicity to the general public than in any other way. The doctors of Graves County have all cooperated and made an effort to do their part during these strenuous times.

As you know, practically every doctor who is able to practice is a member of our society, and we believe that the success of our society is caused by the promotion of good-fellowship among ourselves. We have not accepted the emergency plan yet because the doctors do not fully understand it, and we expect to find out more definitely in regard to it at this meeting.

By the way, we haven't forgotten the Woman's Auxiliary, in which we have fifteen active members, and I expect we stand about the largest registered attendance.

GREEN COUNTY

G. R. ROUNDTREE: Mr. Chairman and Gentlemen: We have a very small county, five doctors, four practicing physicians and one full-time county health officer, and every one of them belongs to the Association and is paid-up in dues.

We have a tri-county society that takes in Green County and Adair and Taylor, and Marion County has also been added to it. It is very active, and every quarter we have regular meetings.

We want to thank Dr. Barbour and many of the good men of the state for coming down and giving us talks.

HARDIN COUNTY

J. M. ENGLISH, Elizabethtown: Replying to the request of the Council conveyed to me through Dr. McCormack, I shall endeaveor to give a resume of the activities of the Hardin County Medical Society for the last year.

The society has met on the second Thursday of each month except the months in which the Muldraugh Hill Medical Society meets.

Our society has always had and still has but one object in view, namely to make and have ethical doctors who also have but one object in view, to give the best service to the public that is possible under the conditions that exist at any particular time.

This year our efforts have been threefold. First, we have had under consideration the Five Year Studies of the Committee investigating the Cost of Medical Care. Our conclusions, after extensive study and discussion, are that in spite of all disclaimers to the contrary, it is only a muffled step toward state medicine which we condemn and despise.

Second, we have had to combat so-called free clinics which, to say the least, lower the confidence of the community in the local doctors, undermine the self-respect of the people, and tend to pauperize those who become the recipients of these services. We have taught our people to call them "Tax Bought Clinics," for which the same taxpayer frequently is hit three times for the same purpose.

Third, our biggest and hardest task has been to overcome the insidious influence of the Red Cross and the R. F. C. programs. The doctors of our society have always seen to it and are continuing to see that no worthy poor are neglected. We take pride in that. There is not and there has never been any legitimate excuse for federal or state aid in Hardin County.

In our efforts the society has almost complete co-operation among its members. All of its meetings are fairly well attended and the reports of clinical cases and their discussions are helpful and instructive to those who attend. In fact, they constitute a very good postgraduate course when considered in the aggregate.

It is safe to say that as long as the present membership of the society lives, paternalism, socialistic propaganda, and state medicine will have rough sailing in Hardin County.

I would like to say, in addition to this report, that Hardin County happens to be one of the counties in the state that doesn't owe a dollar.

HARLAN COUNTY

CLARK BAILEY, Harlan: Mr. President and Gentlemen: The following is a brief report of the general activities of the Harlan County Medical Society for 1933.

The Harlan County Medical Society consists of about fifty members. During the year two members were lost through moving to other counties. Two new members have been accepted by the society, and the admission of another is pending the routine investigation of his credentials.

The following are the officers elected at the first meeting of the year: President, Dr. L. O. Smith, Harlan; Vice-President, Dr. J. G. Smith, Benham; Secretary-Treasurer, Dr. Clark Bailey, Harlan. The society has been active this year in holding regular meetings each month, with the exception of the summer months. At each meeting the business session preceded the scientific session, which was addressed by at least two visiting doctors.

The dues were reduced from twelve to six dollars, and the dinner preceding the meeting which the society was accustomed to pay for was omitted. We feel that better attendance is the rule when dinner is served preceding the meeting.

During the year a resolution was passed to join hands with the other county societies in an active campaign to convince the next session of the General Assembly of the necessity for the development of a state-wide hospitalization program for tuberculosis cases.

The society during the year has cooperated with the representatives of the Save the Children Fund of America in their work in Harlan County. A tremendous amount of data has been assembled by their workers, which should prove helpful in determining the medical needs of the county.

In addition to the report, I am submitting the report of that committee.

The society unanimously agreed to cooperate with the Kentucky Relief Commission in adopting the medical relief plan submitted to them.

The society in cooperation with the Kentucky State Medical Association and the Kentucky State Board of Health, sponsored a postgraduate obstetrical lecture course given by Dr. J. R. McCord, Professor of Obstetrics, Emory University School of Medicine, Atlanta, Georgia. These lectures were well attended by most of the doctors of Harlan County and many doctors from surrounding counties of southeastern Kentucky and Tennessee. Those who attended the course were high in its praises and those of us in Harlan County feel that much was accomplished by Dr. McCord.

The society went on record as unanimously approving the minority report of the medical economics committee and instructed the delegate to vote against any move which might bring the doctors of the state toward the practice of state medicine.

We feel that the regular meetings of the society contribute to higher ethics of its members, and that a closer association of its members, which would otherwise be lost, is attained through its activities.

### Analysis of First 1000 Children Examined August 1, 1932 to August 1, 1933 Harlan County Child Health Demonstration

| | |
|---|---|
| Total | 1000 |
| Males | 495 |
| Females | 505 |
| Below normal average weight | 430 |
| Poor nutritional status | 111 |
| Unbalanced diet | 721 |
| One pint or less of milk per day | 505 |
| Not enough water | 344 |
| Insufficient sleep or rest | 570 |
| Poor posture | 195 |
| Not immunized for smallpox | 887 |
| Not immunized for diphtheria | 802 |
| Diseased tonsils | 139 |
| Enlarged tonsils | 376 |
| Decayed teeth | 235 |
| Intestinal worms, reported | 320 |
| Abnormal external genitals | 299 |
| No cod liver oil or sun-baths | 772 |

### Summary of Activities of the Harlan County Child Health Demonstration August 1, 1932 to August 1, 1933

I. Personnel

1. Regular:

| | |
|---|---|
| Director—Public Health Doctor—full time | 365 days |
| Nurse—Public Health Nurse—seven months, ten days | 283 days |
| Sanitary Inspector—full time except vacation | 340 days |
| Clerk. February 8, except 1 week vacation | 170 days |
| Mrs. Saylor (partial volunteer) three months | 30 days |
| Total time given above | 1188 days or three years and 3 months by regular staff |

2. Volunteer:

| | |
|---|---|
| Cooperating physicians in 11 centers | 15 |
| Nurses assisting in conferences | 10 |
| Women on local committees and assisting at conferences | 33 |
| Approximate number of days service given | 322 or 10 months |

II. Administration:

| | |
|---|---|
| Number of Child Health Centers established in Harlan County | 11 |
| Number of Child Health Conferences held | 43 |
| Total number of children examined and inspected at conferences | 1566 |
| Number of individual children examined | 1181 |
| Number of defects found in these children | 2709 |

Number of mothers instructed at conferences .....1076
Total number mothers and children under instruction.....2257

III. Public Health Nursing:
Number of censuses of children under six taken ..... 12
Number of individual volunteer workers in Centers ..... 92
Number pints of cod liver oil received from S. C. F., R. F. C....1160
Number of pints of cod liver oil distributed ..... 848
Number pieces of health literature distributed .....6966

IV. Sanitary Inspection:
Total number of sanitary toilets completed July 31, 1933..... 318
Total number of dairies elevated from Grade D or lower to Grade A ..... 9
Total number of dairy inspections ..... 132
Number samples well and spring water sent to state laboratory....300
Number of polluted wells abandoned and new ones dug..... 1
Number wells found polluted and chlorinated ..... 200
Number food shops visited with inspector from state..... 400

V. Public Health Education:
Number weekly health columns prepared for three newspapers 60
Number lectures given..... 31
Number attending lectures, approximately .....1530
Number articles written for paper and health column..... 38
Number milch goats purchased 6
Number goat progeny at present, 1 buck, 1 doe..... 2
Number goats placed in families ..... 4
Number children supplied by these goats ..... 23

VI. Miscellaneous:
1. Meetings attended:
Outside Harlan County .....14
Inside Harlan County..... 23
3. Guested entertained ..... 42
3. Total number persons benefited by the work of the Harlan County Child Health Demonstration:

| | Children | Parents |
|---|---|---|
| Child health conferences.... | 1200 | 1076 |
| Safe milk suppy, 9 Grade A dairies ..... | 600 | 200 |
| Safe water supply..... | 600 | 400 |
| Sanitary toilets, 318 ..... | 1000 | 700 |
| Goats, 4..... | 24 | 8 |
| Cod liver oil..... | 848 | |
| Health literature distributed ..... | 200 | 1000 |
| Lectures given ..... | 500 | 1040 |
| Total ..... | 4972 | 4424 |
| (Approximate) ..... | 5000 | 4400 |

Grand Total.....9300

4. Number of miles traveled.....15,522

Age Groups for First 1000 Children Examined by Harlan County Child Health Demonstration

| Months | Number | Male | Female |
|---|---|---|---|
| 0- 5 | 59 | 29 | 30 |
| 6-11 | 96 | 51 | 45 |
| 12-17 | 83 | 41 | 42 |
| 18-23 | 73 | 31 | 42 |
| 24-29 | 84 | 37 | 47 |
| 30-35 | 83 | 47 | 36 |
| 36-41 | 86 | 35 | 51 |
| 42-47 | 68 | 39 | 29 |
| 48-53 | 89 | 44 | 45 |
| 54-59 | 86 | 47 | 39 |
| 60-65 | 109 | 49 | 60 |
| 66-71 | 74 | 38 | 36 |
| Total | 1000 | 495 | 505 |

### Harrison County

W. B. Moore, Cynthiana: The Harrison County Medical Society has had a very prosperous year. We held twelve regular meetings and one called meeting during the year.

Our present membership is sixteen. We lost one member by death and one member for non-payment of dues during the year, and gained two new members. Every eligible physician in the county, save the one who was dropped for non-payment of dues, is a member of the society.

Our average attendance was fourteen. We have visitors from adjoining towns and counties at many of our meetings and the papers and reports of cases have been interesting and instructive.

Our programs are made out before the first of the year, so that each member knows the subject assigned to him for a paper.

We believe that the feeling of good fellowship among our members is not surpassed in any society.

The honor was conferred upon the Harrison County Medical Society of being host to the first extension course conducted by Drs. Barbour and Hendon under the auspices of the State Medical Association. The meeting was held in the City Hall at Cynthiana

on July 27th, and continued the entire day, with dinner at the Hotel Harrison. The meeting was attended by more than fifty physicians from surrounding counties and was conceded by everyone present to be the most enjoyable and instructive meeting they had ever attended.

HENDERSON COUNTY

R. EMERSON SMITH, Henderson: The Henderson County Medical Society held five meetings last year, and also had a special meeting to discuss the Cost of Medical Care, of which they requested that I make a report, which I am here submitting:

REPORT ON COST OF MEDICAL CARE

After carefully going over the report on "The Cost of Medical Care" as submitted by the Committee, we cannot help but feel that a great deal of hysteria is manifesting itself. Our opinion is, if we study the etiology, that much of the difficulty exists only in our larger centers where enormous sums of money have been spent to erect so-called medical centers, and the overhead has become so tremendous that the enterprise has practically destroyed itself.

We are in an age which brought about a very materialistic attitude of mind. If we view this period through which we are passing from a philosophical standpoint, we cannot help but see reflected in this report a standardization which is utterly foreign to human nature, the idealism and personal touch have been practically eliminated. It is utter folly to standardize human nature; it is utter folly to try to mould the personality of an individual so that it may become standardized. Our nervous patient cannot be handled as our phlegmatic. Our high strung, intelligent patient, cannot be approached as we would approach that bovine type whose reflexes are so slow, whose coordination is so utterly out of keeping with the human race that we stop and wonder as to whether we are handling a human being. It is essential to standardize the parts of an automobile; it is all right to standardize our highways; but to standardize human nature and the various types that compose our complex social structure, is going too far and reflects on the intelligence of the medical profession.

There must be a certain amount of readjustment, but we question very seriously if the time has come when nation-wide readjustment must be made. There are too many chaotic ideas, especially on the part of the politician, banker and statesman, to encourage the medical profession to venture on any plan at present. We must come back to a normal financial basis; we must wait, and see what this readjustment is going to produce; we must not make matters worse by adding to the difficulties that now confront us. When these plans are submitted, they should be constructive, far reaching, definite, and the plans so laid that they can continue to build on the structure and expand as necessity demands or as changes in our social structure may warrant. These plans will have to be worked out so as to meet the needs of those in the rural population and small towns as well as in our congested areas, such as we find in our large cities. The industrial community must have plans that will meet conditions that are quite different from those existing in our cities and rural districts.

This does not mean that we are inferring that there is no need for the public health service rendered by both Federal and State governments; epidemiological work should be done by trained and skilled workers. In this field there must be a definite coordination between these two services because epidemics can become nation-wide overnight too, the system must be one that reaches to all parts of our nation and that has the authority and equipment to control emergencies that may arise. The work that has been done up to the present has been absolutely necessary and its value cannot be gauged in dollars and cents.

In educating the public to the necessity of preventive medicine, our public health services have lost sight of the fact that they have made the public feel that its work must be rendered to them as a gift, with no remuneration from the individual receiving such services. This has occurred because our health units have over-stepped the mark with children's clinics, etc. We all admit that the medical profession is in need of definite training in preventive medicine; there is a definite lack in our medical schools of courses on epidemiology and preventive medicine. These courses should be just as extensive as our courses in the practice of medicine. There has been considerable overlapping of organizations whose purpose it is, directly or indirectly, to minister to the ailments of mankind. It is in this field that definite action should be taken and it should be done at once.

There is another field in which we think much can be done at the present time to aid in solving some of these problems and that is medical care in industrial centers. The great corporations and industries have never properly rendered medical and surgical care to their employees. It is undoubtedly the concensus of opinion that our industries can well afford to maintain ample medical care with proper remuneration to the medical and nursing profession, which, up to the present

has never been done. For instance, some corporations take from their employees so much for medical care. On investigation we dare say we will find in many instances, probably in the majority of instances, as low as one-half of the money paid out by the employees is being used in medical care. Where does the other fifty per cent go? The medical and nursing profession certainly do not receive the proper remuneration for their services. With but few exceptions even where these organized industrial hospitals and units do exist, both the nurses and the doctors are underpaid for the most part of their services.

There must be a definite coordination of medical care rendered to the public. Here is where we feel there is an immediate need of prompt and decisive action. The work rendered by the United States Public Health Service should be properly coordinated with the public health work of the various states, and these two organized bodies should be properly correlated to cooperate with the work rendered to the public by the civilian doctors and nurses. We do not think that anyone would question the statement that thousands who are able to pay take advantage of the free service rendered by these two organizations.

The hospitalization of ninety per cent of our veterans can easily be done in private hospitals, and we include in private hospitals, city owned and managed institutions. We are well aware of the fact that the objection has been raised that the red tape connected with the government institutions would be lacking. If a personal opinion may be expressed, we would like to state that much of the red tape which exists could be easily omitted, and, as far as accuracy of the government records of the discharged soldier are concerned, we can refer to those who are acquainted with and have handled such records and who will bear us out that in many instances, they are far from accurate. Illnesses and injuries received while in service are not recorded on hospital cards, discharges and the superficial examinations given to thousands on discharge are a perfect joke if it were not for the serious effect that has followed in many instances.

Where the government has large numbers of these individuals hospitalized in private institutions, they could well afford to have a trained individual or individuals to do the clerical work required by the government. In smaller institutions, the government could pay a salary to a stenographer, who in turn could be taught the routine of reports and maintain this side of hospitalization. We do not think that there is anyone that would question the tremendous saving to the Federal governent if a plan of this kind were adopted. As far as the expenditures in these hospitals are concerned, they would be far more easily investigated and controlled than in our large government institutions and the patient would be far more satisfied if he were hospitalized in his own state or near his friends and relatives.

The question may arise in some locations as to whether the hospital would be large enough to accomodate these government patients. When this occurs, we would make the following suggestions: Let the Federal government build adjacent to the hospital a suitable building which would be directly under the management of the hospital with its medical and nursing staff and which would have the supervision of the public service or the service of any other branch of the government which might be in control of the veterans. In other words, allow the civil medical profession, both medical and nursing, to render the medical service. Another fact that has been lost sight of is that in this way, the Federal government can easily train a corps of physicians and nurses which, in time of war and emergency can be called on to render most efficient service on short notice. Too, many patients due to the nature of their ailments such as tubercular cases, mental cases and drug addicts, can be better handled by institutions which are properly located in regard to climate and elevation and are properly equipped with a specially trained staff to care for their inmates.

The fact that the medical profession has not been properly remunerated and is today suffering a hardship as never before, is largely due to the medical profession itself. There is a high altruistic idealism that underlies the activities of the medical profession and under no circumstances can our profession allow the lowering of this spirit of idealism and service. The politician, be he great or small, be his influence national or local, has, in many instances, taken advantage of these under lying ideals of the medical profession. He has ruthlessly, intentionally and even with malice and forethought used them to his advantage. He has dumped the pauper on the medical profession and its institutions saying, "Here they are you cannot afford to allow them to suffer," and we have stupidly taken them in lest some criticism be placed at our door. The time has come when the medical profession can and will have to say that our doors are open as they always have been to those who suffer and need the care and skill of our profession, but that these are charges of the state or county or city, who must see that

they are cared for, who must pay for the service that we shall render necessary to cure or relieve their suffering. Let the medical profession, without fear or favor, denounce this practice and arouse the conscience of the public to the responsibility that exists to this class in our society, and if necessary, make a levy on the taxes for this definite purpose. The training, the equipment and the maintaining of a profession such as ours requires more time and money than any other profession that serves mankind. If the greatest thing in the universe is man is it not high time that we place a higher value on the care of the human being? Do we not need a readjustment of our value, and are we not placing a far greater value on the material than on the physical and spiritual side of our social structure?

Look at our courts and see how willingly large sums are paid to prevent a man from being incarcerated, but the same individual would have a horrible nervous attack if a physician should present him with a bill of half the amount for saving his life in an acute illness or in setting bones which, if not treated, might cause death or result in a useless limb. The medical profession has long remained silent on what the value of this service means to mankind. The public must be taught to place in their budget a certain amount for medical care. In the human psychology, birth seems to be far more common and natural to the average individual than death. Not long ago I was talking to several boys between the ages of eighteen and twenty who were going to take a trip in a broken down automobile. I mentioned the fact that it was a dangerous undertaking, that they might injure not only themselves but also others. They answered in a chorus "They will pick us up, take us to some hospital and get us fixed up if we don't break our necks." Neither the boys nor their parents were financially able to pay a reasonable medical or surgical bill, to say nothing of the hospital expenses.

The medical profession must get at the public, must place before the public its responsibility to take care of itself and to plan for these emergencies of illness and accident. We feel certain that this would minimize many of our accidents and illnesses which are brought about by carelessness and by a false feeling of security that they will be taken care of and that medical assistance will be rendered.

"The Report on Medical Care" places before the public a number of findings, which to our mind, have done the medical profession no good and have certainly not helped the public. It has accentuated the cost of medical care and, we think, we can honestly say without the slightest fear of contradiction by any honest man, there is no profession under Heaven that is so underpaid and the majority barely making a livelihood. The Committee failed to bring out the cost that accompanies medical care and the tremendous expense that is connected with the practice of medicine. There is a vast difference between what medical care costs a patient and what it actually costs to render this care to the individual. The report discussed what it costs the patient, but not what it costs the hospitals and medical profession to render the care to the patient. The public should be informed of the cost of sterilization preceding an operation. Would it not be available to have a comparsion of our expenses with that of the average American first class hotel? The average American gets hospitalization, nursing and food, for less than a moderately priced room in a first class hotel. We are afraid that we have over accentuated and have turned on a spotlight on only one phase of the subject. The report, we feel, is very inadequate.

You take our large hotels in our large cities and you find very few hospitals in any city with the number of rooms that these larger hotels have. We speak of the average American not being able to pay hospital expenses. Is the average American able to maintain an automobile? Is the average American logical in his attitude toward having an automobile when he cannot afford it, while at the same time he is utterly ignoring in his budget the necessity for medical care? Would it not be well for the American Medical Association to appoint a committee to compare the cost of medical services with the cost of the disposal of sewerage in a city, of lights, of paved streets and other municipal necessities and improvements? To have a report on the work that is done by our hospitals for the so-called pauper patients, emergencies and accidents, also to publish to the world the number of physicians that make $6,000 a year and under? The cost of medical care of every city and county is held down to the very lowest possible point, barely covering the overhead in many instances, and the medical profession receives a mere pittance for their services in these cases. Take our educational system, we are told that several years ago there was more money spent on raising hogs than was spent on the whole educational system of the United States. We are not for one moment questioning that these other enterprises are not essential and necessary, such as sewerage, light, good streets, hogs and hotels, but we feel that if we are to meet this situation we will have to approach the subject from an en-

tirely different viewpoint. We will have to compare the expenses of medical care with other civic necessities to maintain health and to render comfort, luxuries and ease to the American public. We must place squarely before the people the necessity of bringing about the revaluation of medical services. We must also impress the American public with the existing facts of the actual cost and with the necessity of adequate, skilled medical attention that is needed for the public demands the very best.

It seems to be a recognized fact that it is permissible for members of the legal profession by virtue of their skill or learning to make a fortune in their profession. The engineer is allowd this privilege, the business man the same, the banker seems to be allowed the skies as his limit, but to the medical profession and the preacher this privilege is banned. They must not make a living, they must eke out an existence; although the Great Physician said a laborer is worthy of his hire. The medical profession seems to be considered by the majority of our people as a group of individuals with altruistic motives who are perfectly willing to go around as mendicants. Their fees are discussed in private, even in public and through the newspapers, but I have never heard of a legal fee nor that of a consulting engineer discussed in a newspaper. In one instance the brain power is used by moneyed interests to make money, in the other instance the brain power is used to save human life, to relieve suffering and misery.

Gentlemen, we must approach this subject entirely differently from the manner in which it has been approached in the report on "The Cost of Medical Care". The psychology that exists today, and has existed for years, of the fees or the debts to the medical profession being debts which are not necessarily binding, the attitude of the public, and, as we stated before, the valuation of the services rendered by the medical profession must be changed.

We can only arouse the public consciousness to the responsibility of maintaining health and relieving suffering by placing this on a basis of dollars and cents. In other words, a healthy body and a healthy mind with healthy environment are necessary to success and without these the community cannot expect to prosper. The medical profession will have to approach the dollar mark, as obnoxious as this may seem to us. But we know that this can be done and the medical profession has the resources within its own members to place this before the public in such a manner that it will not injure our high standards and ideals which have kept our profession on the high plane of service and made it the most needed and reliable friend that humanity has in times of illness, catastrophe and war. Ever since the creation of man the disciples of Aesculapius have been called to deliver the new-born babe and to relieve the suffering of the aged at death.

We merely need to place before the American nation the facts and to impress them with their responsibility. We are confident this can be done but the whole of the medical profession must cooperate and bring about these changes, never forgetting the ideals that have inspired our profession through the ages and the unselfish service to mankind which is our proud heritage.

They had another meeting which was held to discuss the problem of state or federal aid in regard to pauper patients. The Henderson County Medical Society felt that it was not necessary for physicians to sign that, as the county and the city of Henderson take very good care of the indigent. For that reason we did not sign it, and I think Dr. McCormack was notified accordingly, not that we haven't the pauper patient, but it is a county and a city that take care of their poor in, I think, a remarkably fine way.

Another thing that the society has done has been that they have, without hesitation when called upon by any organization to render aid in the last few years, gone promptly and done it without the slightest reluctance. During our flood last winter the Legion called on the medical profession of Henderson, and the medical profession answered promptly and efficiently.

There was a circular letter sent out by the secretary of the Henderson County Medical Society, with the questionnaire which Drs. Abell and Barbour formulated upon the cost of medical care. That was copied and sent to thirty physicians in Henderson County. Not all of them are practicing. We received answers from ten. The answers we received were unanimously opposed to the majority report and were unanimous in adoption of the minority report. The society went on record that they were absolutely opposed to any form of state medicine.

At present we are not able to say how many members we have, because after the majority of the members paid up, one of our banks closed, and they are holding the money under that five per cent moratorium, and the secretary being sick just before I left, he was not able to tell me definitely how many were members, although the majority of the active physicians do belong to the society.

I do not know that there has been very much gain in the knowledge acquired in our society by the answers to these questions. The

only value that I can see in it has been that we have caused physicians in our county society to give some thought to this problem, the cost of medical care.

On July 18th, state medicine was discussed at a meeting of the Henderson County Medical Society, and the unanimous opinion was that we do not approve of state medicine. Although there has been much information gained in the committee's report, we feel that this information is lacking in many respects. Unfortunately the committee has neglected the standardization spirit steadily undermining our civilization. We must in each state have an investigation committee which will report all of the definite existing conditions and difficulties and advantages that there are in each commonwealth, and until that is done our cost of medical care, gentlement, is absolutely worthless. We cannot take a topheavy system which has occurred in our great cities like New York and Chicago, Baltimore, Philadelphia, with structures so huge that they have destroyed themselves, and think that the rest of the United States is under the same conditions.

We have problems in the State of Kentucky that no other state has, and each commonwealth has its own problems. We have difficulties that have got to be solved after thorough investigation and a great deal of patience and a willingness to cooperate and to see the point of view that the other individual may have on the same subject, and we are not going to get to the bottom of the cost of medical care until we have a definite idea of the various commonwealths.

As some of the members brought out in two of our meetings, we must not only have those facts, but we must have those facts correlated and coordinated so that the medical profession can step out of a position of give, give, give continuously. We are not saying that because we are disgruntled, but a burden has been placed on the medical profession in the last three years that has not been placed on any class of men in the history of man. The American medical profession in the last few years have borne a burden that no other class of men have had to bear, and it is high time that we make the public realize that health and life are as important and are as deserving of remuneration as the services of the legal profession who can claim practically any salary, or the engineering profession, or any other profession. Because those professions are making money they can demand money, whereas the medical profession cannot demand money because it is not making money, and that is about the attitude of the public. We are supposed to be a charitable organization, and I think we have been too careless for entirely too many years regarding the financial status of the physicians of this country. It is high time that we have a report from our individual states.

It cannot be done in a day, but it should be done and we should demand that that report be not only for this state, but for all the states of the Union before we have any expression that is concise and definite regarding our cost of medical care. New York City, Chicago, Philadelphia, Detroit, Boston, do not represent in any way whatsoever the medical problems that exist in our small centers. I would hate to give these cities as an example of what we call Americanism, for they do not in any way represent American people, being from thirty to sixty per cent in race, acts and ideas, foreign to our conditions, ideals, and the like.

The report that we have received on the Cost of Medical Care is out of balance, and we believe that undue influence has been exerted by picturing the congestion that exists in our larger centers and not giving a true idea if what actually exists throughout the whole United States.

JEFFERSON COUNTY

A. W. NICKELL, Louisville: Mr. Chairman, Members of the House of Delegates: Time precludes the possibility of elaborating upon the achievements and accomplishments of the Jefferson County Medical Society. I will therefore proceed to give you an epitome of the proceedings of this society.

I might say in passing that Jefferson County has a paid-up membership of 336 members.

Jefferson County reports with pride that it has had excellent programs and almost without an exception, free discussion on all. The attendance has been above normal throughout the half year. We have been fortunate for the time elapsed to have had four outstanding guest speakers:

LUTHER C. PETERS, Philadelphia, Pa.
J. R. MCCORD, Atlanta, Ga.
MAX CUTLER, Chicago, Ill.
FRED W. RANKIN, Lexington, Ky.

We have had only one called meeting during the year, and that was on July 31 for adoption or rejection of the state relief program, which we are glad to report was adopted.

Early in the year we amended our by-laws that we might add additional committee or committees. A committee was formulated on Medical Economics. Dr. Virgil E. Simpson was made the Chairman. The committee is composed of six members, all of whom are working hard, and we feel even at this early date we can report considerable progress.

There generally comes a little bitter with the sweet and we ought to make an accurate

report of these things. There are a few things outstanding in Jefferson County that we are in no wise proud of. One, that only about sixty per cent of our doctors are members of our society, or any other society for that matter. Another, that our members have been slow in paying their dues this year, there being some twenty per cent of our accountable members who are now in arrears. This does not speak for lack of interest, but it is due, we are sure, entirely to the economic depression we have all gone thru.

Emmet F. Horine, Louisville: The Jefferson County Medical Society sends greetings to her sister societies. In so doing a cordial invitation is herewith extended to all members of the State Association to attend any of the meetings which are held in the amphitheatre at the City Hospital on the first and third Monday of each month. The scientific portion of the meeting usually begins at 8:30 p. m. with the essay of the evening called for promptly at 9:00 p. m. Announcements of our meetings are being regularly published in the State Journal.

The Jefferson County Medical Society continues as the largest unit in the state, despite the fact that old man depression has thinned the ranks. The highest paid membership in our history was in 1930 when the roster showed 411 names in the face of the mortality among Louisville banks. In 1931 our membership had been reduced to 400, while in 1932 the membership stood at 391. Thus far in 1933 we have only 339 members who have paid, but the Executive Committee has plans on foot which should materially increase our membership before the end of the year.

During 1932, eighteen stated meetings were held and one alumni dinner meeting. We entertained six non-resident guest speakers during 1932. The actual work done at the meetings consisted in one clinico-pathological conference, seventeen case reports, six symposiums, six essays, and six addresses.

Our next stated meeting will be held on Monday, September 18, 1933, and this will be the 686th to be held since our organization.

Laurel County

G. S. Brock, London: Laurel County has an all-time health unit. It has nine practicing physicians. Nine belong to the Laural County Medical Society. We all get along pretty good. Each one wants the other fellow to do the work. (Laughter).

Livingston County

William C. Davis, Smithland: I have no written report, but we have nine doctors in Livingston County, and there are no malpractice suits or anything like that. We have lost one doctor, T. M. McGinnis, of Tiline, by death.

We have no Woman's Auxiliary, but we hope to have by the next report we make.

McCracken County

P. H. Stewart, Paducah: The McCracken County Medical Society began the year 1933 with forty-one members in good standing. We have since lost one of our esteemed professional brethren through death, C. P. Burnett. The society meets the fourth Wednesday of each month, with the exception of the months of June, July and August. Our activities during the past year have been very gratifying. We have had three joint meetings with the Paducah Dental Study Club and have stimulated considerable interest in our mutual problems. We have also secured many guest speakers who have brought added interest and enthusiasm and knowledge to our group. Our society has been informed by J. Duffy Hancock, State Chairman of the American Society for the Control of Cancer, that we were the first society of the state to carry out the suggestions of the state society in regard to cancer work. This program was given before the society Wednesday, November 23, consisting of a symposium on Cancer presented by a prominent surgeon, internist and pathologist. In connection with this program these speakers gave a radio address.

The society also sponsored a postgraduate course in obstetrics given by Dr. J. R. McCord of Emory University, under the auspices of the State Board of Health and the Federal Department of Labor. This course was attended by physicians through the Jackson Purchase, Northern Tennessee and Southern Illinois. We feel that the efforts of both Dr. McCord and the McCracken Medical Society have been justified.

The society has given careful study to the problem of the Cost of Medical Care and the report of the committee on that subject.

The membership of the McCracken County Medical Society is 100 per cent back of the NRA.

H. G. Reynolds, Paducah: I want to make a supplementary report to Dr. Stewart's report. The Sixty-Fifth Annual Meeting of the Southwest Kentucky Medical Association was held in Paducah last May. We had a program with five men of national reputation who delivered addresses; I think each address required about an hour. There was no discussion of the addresses. In other words, it was done with the intention of giving the doctors of our section a postgraduate course.

At the noon hour the time was devoted at the tables to a round table discussion. This gave the members of the society an opportunity to question and make inquiries concerning the different lectures that had been given.

This program was brought about by the Program Committee, of which I was Chairman, for the reason that our district society had failed to do the thing that we felt it should do, in other words that our programs had been set programs and consisted of papers that were not particularly interesting to the different members of the society, and as a consequence our attendance had been greatly lowered. We felt that something had to be done to stimulate more interest, and we feel after two years of trial of this postgraduate work that it is to be a permanent thing, that every member who was there has been very enthusiastic about this method of conducting our annual meeting.

In addition to that, we have quarterly meetings and a semi-annual meeting, which gives the opportunity to the members of the society to have their individual discussions and papers, and we feel that that is the best arrangement of program.

Supplementing Dr. Vance's idea about the secretary being the chief in any county society, I want to add to that by saying that I think the program of every society really will bring about interest and attendance to those societies.

P. H. Stewart: Mr. President, I would like whole-heartedly to endorse the supplementary report of Dr. Reynolds.

Madison County

J. W. Armstrong, Berea: We have about forty men practicing in Madison County. Thirty are paid-up members of the society. The average attendance at meetings has been sixteen. Nine worthwhile meetings were held during the year at which scientific programs were presented. These were given by our own men, except a fine paper on Rheumatism in Children, by Dr. Philip Barbour. Two special meetings were called for the discussion of medical service in Madison County. The final resolutions resulting from these meetings will be submitted to the Association at the proper time.

We have appreciated the cooperation and help of our Councilor, Dr. Vance.

Marion County

G. G. Thornton: Marion County has twelve doctors, eight of whom are members of the society and four of whom are not. Our Marion County Society is merged with Taylor, Green and Adair counties, meeting at the county seats of the different counties once each year.

At a called meeting of our society on September 6th we took up the proposition offered by the R. F. C., and with one exception the offer was treated with contempt. Our doctors are willing and always have been to do their share, and more of the charity medical work for our charity cases, and have done it freely. We feel that the man who is competent to do the service is also competent to make the charges for them, and up to the present, notwithstanding the great depression, we have been independent enough to do real charity and not near charity as this offer would force us to do. Yes, we believe in NRA and will do our part, but we beg the privilege of being allowed to maintain our self respect, which we could not do if we submitted to such pittances as the R. F. C. proposes with its dictatorial requirements.

Marshall County

W. T. Little, Calvert City: The Marshall County Medical Society meets on the third Friday night of each month at Benton, Kentucky. F. C. Coffield, Hardin, Kentucky, is President, and S. L. Henson, Benton, Kentucky, is Secretary.

There are fifteen physicians in Marshall County, thirteen engaged in active practice, all of whom have their dues paid for 1933. We lost one member, E. G. Thomas, by death, and gained one not a member in 1932. The total membership for 1933 is the same as for 1932.

The Auxillary holds its meeting on the same night. These meetings have been preceded by joint six o'clock dinners which have proven to be one of the most enjoyable affairs in the history of our society. Any sketch of the Marshall County Medical Society would not be complete without giving much credit to members of the Auxiliary for their efforts toward raising the health standards of our citizens

Two years ago the Marshall County Medical Society decided that the outstanding need of the people in our county was a health unit. Many physicians attended a meeting of the Fiscal Court, and after explaining the purposes, advantages and cost of a county health unit, secured from the court the necessary appropriation.

Dr. S. L. Henson, Miss Mildred Kincaid, and Mr. Will Eley, all residents of Marshall County, were selected as members of the unit.

The major effort of our county society during the past two years has been to assist our county health unit. We have been ably assisted by leading citizens and the educational department of the county. Every Parent-Teachers' organization and Woman's Club in the county has rendered valuable services. In efficiency and enthusiasm we have a unit second to none, and may I truthfully report that Marshall County physicians work together with a minimum amount of differences.

I wish to supplement this written report by a few words concerning the death of Dr.

E. G. Thomas, the member that we lost during the past year by death, who was past his eighty-first year, with sixty-one years of active practice as a physician, because he graduated a year before his twenty-first birthday. We have reliable information that he was a continuous member of this society for forty-three years. We know that, and we think, Dr. McCormack, that he really was a continuous member for more than fifty years, but we have information to the effect that for more than forty-three years he was a continuous member.

SECRETARY MCCORMACK: Another member of the State Association desires to join in the tribute to Dr. Thomas. On two different occasions he was Vice-President of the Association. He was constant in his attendance, he was a noble old Roman, and he gave wonderful service to the people of his county.

At the same time I want to take ocassion to pay tribute to another member of the profession, Dr. J. G. Furnish of Erlanger, who died just this last week. He practiced for many years in Boone County, was for four different terms a member of the State Senate of Kentucky, was Superintendent of the Central Kentucky Hospital for the Insane for two terms, a member of the State Board of Health for two terms, was Medical Referee in Boone County for ten or twelve years, and Medical Referee in Kenton County since his removal to that county, and has been one of the finest examples of the splendid physician in the State of Kentucky.

MASON COUNTY

A. F. MURPHY, Maysville: There are twenty-four doctors in Mason County, and two of them have moved in in the last year; there were three young doctors who came in, and one has left already. Eighteen of these are paid-up members. Two of the non-members are retired, having been in the society for a good while. One is colored and two have never been members. There is only one doctor who was a member last year and is not a member this year.

We held regular meetings the second Wednesday night of each month, with the exception of August. At each of these meetings we have used out-of-town speakers. We know that that is the way to get our men to attend the medical society, so regardless of some criticism once in a while, we do that just the same.

We held one tuberculosis clinic and followed it with a lecture in the evening, for which we are very thankful to Dr. Turner and Dr. Frank from Louisville, and we followed this the following month with a wonderful lecture by Dr. Smith. I think we have made our own men more tuberculosis conscious than they have ever been before.

There was one special meeting held at which we adopted the program of the Kentucky Relief Commission. I think the most wonderful thing that we have to report is that we have five surgeons that hold a tonsil clinic in the Health Department offices every Wednesday morning. This was the practice before I went there and it still continues. We have no trouble whatsoever getting people in there who don't belong there. If someone comes that we think can pay, we just put them off until we find out for sure whether they can or not. We don't let anybody attend this clinic that can pay the hospital fee. However, we do have some who can't pay the full fee, but can pay something. Once in a while somebody will ask what we charge. We tell them we charge every cent they possibly can afford to pay. Whatever they pay is used to defray the expense of the clinic, and occasionally somebody pays a little bit toward the service. This operates beautifully; nobody objects to it, and it goes along just like turning the wheel.

In September the Licking Valley Medical Society will hold a meeting at Maysville.

MONROE COUNTY

GEORGE W. BUSHONG, Tompkinsville: I haven't a written report, but I think in the last twelve months we have lost Dr. J. H. Bedford, who, if I am not mistaken, graduated in the first class that ever graduated from the old College Hospital of Medicine. He paid his dues every year. I don't think he ever missed a year.

We have left in our county six active practitioners or semi-active practitioners. Two are over seventy years of age, two more are between sixty and seventy, one over fifty, and one between thirty and forty, and they are getting along nicely, taking care of our sick very well, and unanimously agree to take any help they might get from any other source. (Laughter)

MUHLENBERG COUNTY

E. L. GATES, Greenville: We have eighteen active physicians in our county, and we have one whole-time health officer who is doing excellent work, and we have one U. S. Public Health Service man.

Of the eighteen, eighty-four per cent are paid members in the State Association.

For a year or two we were in a slump, and in January we reorganized our society, with Dr. Simpson as President, and our health officer as Secretary, and we have been having regular meetings since the first of January on the second Tuesday night, alternating bebetween Central City and Greenville.

### Muldraugh Hill

Walter Hume: The following is a summary of the activities of the Muldraugh Hill Medical Society for the past year.

Three regular meetings, December 8, 1932, Elizabethtown, Kentucky, attendance forty-five; April 13, 1933, Elizabethtown, attendance thirty-eight; August 10, Glasgow, attendance forty, total papers read, eleven.

Total discussion, fifty-two.

Clinical cases presented, four

Attendance and interest show the society to be very much alive and doing good work.

### Nelson County

R. H. Greenwell, Bardstown: Nelson County has thirteen doctors, ten paid society members and three non-members. We meet two or three times a year, usually have good papers and good attendance. The Woman's Auxiliary usually meets at the same time.

J. J. Wakefield, Bloomfield: This is a supplementary report to the report of the Nelson County Medical Society. I am glad to report that our society has shown more spirit, more interest, than for several years. We have had at least two good meetings in the past year. The members have shown more interest than usual. Our secretary has made up a fine program for these meetings, and the visitors from adjoining counties and especially those from the city have read splendid papers and have made addresses of a high order and put on pictures, lantern slides, demonstrating the subjects upon which they spoke. They were splendid and gave the members a postgraduate course that was greatly enjoyed.

Nelson County has thirteen doctors. However, only ten of them are enrolled as members. We have made efforts to get the other three enrolled, but have failed so far.

### Perry County

R. L. Collins, Hazard: There are thirty-seven doctors who are eligible to membership in the Perry County Medical Society, thirty-four of whom have paid their dues. We hope to make the membership 100 per cent before the year is over.

The society has held regular monthly meetings, the second Monday in each month during entire year. An interesting program has been rendered at each meeting. The attendance has been well above the average.

A meeting was held in March with Dr. J. K. Stoddard at Wooten, Kentucky. After the delivery of the paper of the evening, Why Backache?, by Dr. J. C. Coldiron, Dr. Stoddard presented a very interesting clinical case of osteomalacia or fragilis osseous, presenting blue sclera and brittle bones.

The June meeting was held at the Hyden Hospital, with the members and their wives, guests of Mrs. Mary Breckenridge and the Frontier Nursing Service. A paper of special interest on the Value of Periodic Health Examinations was read and discussed by all present. Mrs. Breckenridge then made a talk on the need of reforestation in the mountains of Kentucky and told of her intention of taking this up with the authorities in Washington. This project was endorsed by the society.

On August 14th, a joint meeting of the society and the Auxiliary was held at the Yellow Lantern Tea Room at Hazard. An illustrated lecture on Cancer was given by Dr. McKeithlen of Louisville; Dr. John H. Kooser of Hyden read a very interesting paper on Management of Abnormal Labor. All enjoyed the program and especially the able way in which the doctors presented their subjects.

The meetings at the two out-of-town places are mentioned to show that the Perry County Medical Society has rotary meetings.

In connection with the Woman's Auxiliary, the Perry County Medical Society has sponsored a movement for state-wide interest in the procuring of more hospitalization in Kentucky for indigent tubercular patients. A letter has been written to the Secretary of each county medical society in the state. Quite a few responses have been received, all of which are enthusiastically in favor of the activity. We are still of the opinion that if the project is pushed before the various county medical societies, service clubs, churches, schools and other organizations in the state, adequate facilities for the care of the tubercular in the state can be obtained.

The society also went on record as cooperating with the state medical council in giving relief to the indigent, through the K. R. C.

The Secretary wishes to commend the medical profession in the county as being broad and cooperative and willing at all times to lend themselves favorably to any project for the community's advancement.

### Simpson County

W. L. Vickers, Franklin: We have not had so many meetings, but the ones we have had have been very agreeable and instructive, especially the one we had in April when the Councilor, Dr. C. C. Howard, of our District, assisted by Dr. M. E. Loftus, showed and explained a number of very instructive slides relative to infections which frequently reach the brain from foci around the nose and eye, and emboli and infarcts of the coronary arteries of the heart and their effects on the heart, together with a number of other interesting subjects. All of this was very interesting and was enjoyed by all present.

We have met a time or two since, and have endorsed the R. F. C. ruling made by the state, and have had interesting and instructive discussion of several case reports.

I am very glad to report that we have a good and loyal group of physicians in our county, all of whom are very enthusiastic and attentive when we meet.

TAYLOR COUNTY

W. B. ATKINSON, Campbellsville: The past year has been uneventful in the life of our society. Four times yearly we meet in conjunction with the societies of Adair, Marion and Green Counties. At these meetings we have guest speakers. The more prominent members of our profession have shown a most gracious willingness to discuss problems of practical importance before us that has earned our gratitude and appreciation. The other months are devoted to county society meetings at which our own members present papers and case reports.

Like most of the rural sections, the number of physicians has grown less in our county in the last decade. However, one new member, Dr. Hall, has been added to our roll in recent months. We shall continue to hold high our traditions to the best of our ability.

PRESIDENT BARBOUR: We will now pass to the report of the Committee on Medical Ethics, R. E. Smith, Henderson, Chairman.

R. E. SMITH, Henderson: It is not an easy matter to state briefly some of the irregularities that occur in the medical profession which may be styled as unethical. There are a few of these irregularities which we will mention without discussing the etiology, for we wish to briefly bring the attention of the House of Delegates to these existing conditions.

The Cutting of Prices. Due to the period of depression through which we are passing, the indiviual finds it difficult to meet his current expenses and the time-honored custom of leaving the physician out of his calculations still prevails. Therefore, some of our physicians have decided that it is better to take $1.00 for a residence call, or 50 cents for an office call than it is to book the regular fee or have the patient pay part of the charges. This, of course, demoralizes the medical profession and makes the public feel that they can state the price for the services of the physician. We fear that the practice of cutting prices is far more frequent than we realize or than we wish to admit.

Another unethical practice which has long been in vogue is by the physician who does the practice for individuals who are in a position to refer work to him. Some physicians will tell a foreman or manager of some industry that his work and that of his family will be done for nothing if this foreman or manager will use his influence in sending the physician the medical and surgical work that may be necessary for the men that are under him. This is in violation of medical ethics and also of the Compensation Act, which states, "A man has the right to select his physician or surgeon."

Another breach of medical ethics is the criticism to a patient of the services rendered by another physician, be that an operation or treatment. The physician making the criticism in the majority of instances knows little or nothing of the conditions that existed at the time of the operation or of the illness. Here is one physician criticizing the work that another physician has done. The patient, or individual to whom the physician makes this criticism has instilled in him the germs of dissatisfaction and lack of confidence. In other words, the physician is trying to build up his credit and his prestige by running down a fellow practitioner. The effect in the majority of cases is that he has done nothing but undermine the confidence of the individual, not only in the medical profession, but also in the physician that makes the criticism. We can easily overlook this criticism as it invariably comes back as a boomerang, if it were not for the damage it does to the members of the medical profession as a whole.

Gentlemen, this is getting to be a nuisance, and I think if you will investigate it you will find that quite a number are doing it. We have talked to several physicians in the counties where they have their county health department.

The use of our county health departments to make laboratory examinations for patients for which the health department makes no charge but the physician charges the patient for these examinations is deplorable. Some steps should be taken by the State Board of Health to correct this unethical practice. Those that are able to pay any fee whatsoever for these examinations should not be sent to our County Health Departments to have these examinations made, and those who are not able to pay certainly should not be charged for services which were not rendered by the physician, and we frequently find wealthy patients going of their own accord to our county boards of health and having urine and blood examination made, who could well afford to pay for these examinations. This practice should certainly not be allowed.

Our time-honored custom of fee splitting is not going to be stopped by legislation. Many drastic laws have been enacted and it goes serenely on. They say that no law

that is unjust can be enforced, and I feel that we are losing time discussing fee splitting and enacting laws for its prevention until we correct the prevailing standards that today exist between the practitioner and specialist. We discussed the etiology of fee splittng when we met in Lexington. We feel that what is needed is to bring about a more even distribution of the fees between the practitioner and the specialist. We do not approve of fee splitting, but also, we do not approve of small-pox, and our approving and disapproving have no effect on the disease, and the only way we can prevent smallpox is to vaccinate the individual against this infection. In other words, we must bring about changes in the medical profession so that there will be no reason for fee splitting. Several things can be done to immunize the medical profession against this practice, and we feel that a committee should be appointed by the President to draw up ways and means by which this unethical procedure may be stopped. Legislation, gentlemen, is not going to stop it.

Other unethical practices that have occurred, such as violation of the Narcotic Law or the abuse of the Volstead Act, need not be discussed, as these are matters that are handled by the Federal Govermnent, and all the committee can say about such violations is that we deeply regret them and that they reflect on our noble profession and we feel very keenly the stigma which is so frequently laid at our door of "legalized dope peddlers" and "legalized bootleggers."

There are many minor criticisms laid at the door of the medical profession which are frequently brought about by carelessness and not intentionally by the members of the medical profession. Frequently a physician feels that his actions are those of an individual and that they are of little consequence, but unfortunately the public and the press do not grant him this privilege. They invariably place it as an action of a physician, always making it a point to couple these actions as the actions of a member of the medical profession. Many times the physician is entirely innocent and his actions would not have been noticed or his utterances heeded if he had not been a member of the medical profession, so it behooves us to be more careful, remembering that what we do is frequently interpreted by the public as utterances from the profession rather than from an individual. The works of the medical profession and the high standards, idealism and service have at no time been more beautifully exemplified and more practically applied than during the last three years. Without complaining, without seeking aid, the medical profession in the State of Kentucky has ministered to the sick and the suffering without a murmur or without hesitation, and it is such periods as this through which we are passing that awaken the consciousness of the public to the fact that the medical profession is activated by high ideals and motives that are not gauged by dollars and cents and exemplifies in a most concrete manner the command of the Great Physician who said, "Inasmuch as ye have done it to the least of these, ye have done it unto me."

Respectfully submitted,
R. Emerson Smith, Chairman
John E. Kincheloe,
R. G. Webb.

Secretary McCormack: I move the adoption of the report and that the President be authorized to appoint the committee recommended in it.

The motion was seconded, put to a vote and carried.

President Barbour: Next is the report of the Committee on Crippled Children, Orville R. Miller, Chairman.

Orville R. Miller, Louisville: Mr. President, I doubted for a while that I would be able to be present to make this report in person, and so I have sent one in which more than likely will be printed, and I will make a very brief statement in saying that the work among crippled children during the past year has been carried on very successfully and satisfactorily in spite of the fact that we have all suffered from the depression and financial troubles.

Under the good management of the Crippled Children's Commission, Miss Marion Williamson being the Director, the work has been cut down only very, very slightly. We have had almost as many clinics as were held during the years of 1928 and '29, and almost as many children have been hospitalized and treated. I think that actually there have been some 200 fewer children admitted for treatment than there were during the better years. This, as I say, in spite of the fact that the depression has affected their finances very seriously.

The explanation of it is that the men among the medical profession who have been doing the work have been able to take the cases and see that they were treated in such a way as to allow them to return home much sooner than they had before; in other words, many of these children probably were sent home wearing a plaster cast instead of being kept in the hospital over a period of six or eight weeks or longer, but they return later on for observation.

Nothing new has been developed, except that I might mention that at the present time

the Commission is expecting to hold clinics semi-annually instead of annually as before. This work has already been begun. The second semi-annual clinic was held recently at Paducah, and I think another has been held in Covington.

PRESIDENT BARBOUR: The report will be received and filed.

Next is the report of the Committee on the JOURNAL. Oscar O. Miller, Chairman. (Not present)

REPORT OF THE EDITOR

SECRETARY MCCORMACK: I simply have to report the JOURNAL and present the twelve annual issues this year, with the four quarterly supplements that have been prepared by the Woman's Auxiliary. The general excellence of the JOURNAL is ue to the splendid presentation of papers at our own scientific session and those of our county societies

Our JOURNAL compares favorably with those of other societies, and is read rather more universally than almost any of the state journals. One of the interesting reactions that we get from the JOURNAL has been on the few occasions when there have been too few numbers, and we usually omitted one JOURNAL from each of the county societies in the state, and almost without exception we have gotten a letter from the man.

I take only the personal pride in our JOURNAL that each of you do, because I don't own a bit more of it than you do and have very little more to do with the preparation than you do; you prepare every scientific article that is in it, and every one you write that is sent in to us by the secretary of a county society is published. You are responsible for its character and for the character of its contents, and I can therefore speak of it just as each one of you can, with a considerable amount of personal pride.

It is of extreme importance that the membership pay attention to the character of the advertisements that are accepted. We could have probably five times as many advertisements in the JOURNAL if we would accept them. We get many more advertisements submitted to us for acceptance every month than we accept. We guarantee, however, the financial integrity of the advertiser. If any complaints are to be made in regard to any institution or firm, we settle with the complainant and then we take the matter up and adjust it with the advertiser. It is the only medical publication that has this policy, and we have had it for many years and have been only imposed upon one time seriously.

We feel, therefore, that the members realizing that the advertisers are paying for the publication of the JOURNAL, will patronize them. Twenty-four of the twenty-seven years the JOURNAL has been published the advertisers have paid for it; only two years have we had any deficit from the advertising income of the JOURNAL in its publication. This was one of those years. We built up enough reserve to continue to publish the full JOURNAL as we had done before.

I think every member of the Association takes pride in the Quarterly that the women have prepared for us. I hope you will take the Quarterly home and show it to your wives. I really think they will think more of you if they read that Quarterly, and the Lord knows that most of us need to increase our standing with those who know us best, if there is any possible way to do it. It arms the women with the facts about medical history and medical service that they need to have in talking to their clubs and to their associates, so that they can impersonally say the things that need to be said by some good friend of ours.

One of the sections of the much discussed report of the Committee on the Cost of Medical Care to which too little attention has been paid has been the enormous expenditure in the United States for patent medicines and for the services of the wholly unprepared cult practitioners in many states, including many in this state. That matter of education can be placed in the hands of our women with perfect safety that they will use it with discretion in such a way as to help build up the kind of morale in our people that we need for our support.

Another important factor in the success of the JOURNAL is, of course, the character of the papers sent in from the county societies. As a rule they use a great deal of judgment and discretion in regard to them. We have had very little complaint in recent years, and none this year, as to the character of the papers that have been prepared and read before county societies and sent in for publication in the JOURNAL.

We are particularly anxious to have the minutes of the meetings of the county societies, and we would especially urge on the secretaries of the county societies that they send the minutes in for publication, because they are of interest to every member of the State Association.

Our JOURNAL has made a great deal of progress. At some meeting in Louisville where we can run the risk, I want to bring over all the volumes and set them side by side so that we can all see them. I believe that they have very substantiallly proven the value of the sort of service that our JOURNAL has rendered to our profession.

When we look back at some of the early issues, I always remember with mixed amuse-

ment and regret the article that we presented on the application of wheat dough to the treatment of wounds and abrasions, and several other things of that sort in early issues, and as we have seen that sort of thing disappear and the truly scientific articles appear in the JOURNAL, I think it has indicated the progress, to a very great extent, that has been made in these thirty years by the profession of the state. I believe we have a great deal to congratulate ourselves about in the character of our own JOURNAL. (Applause)

PRESIDENT BARBOUR: General discussion of the JOURNAL. You have heard some favorable comments on it. Are there any unfavorable comments which you want to make?

J. W. SCOTT, Lexington: Mr. President, I think the managers of the JOURNAL ought to be encouraged to go ahead, even if they don't pay out. I believe we ought to have a creditable JOURNAL, and I don't believe there is any better way to spend money than to have a creditable JOURNAL.. If the advertisers don't pay for it, let us pay for it. As a matter of fact the JOURNAL has paid for itself, according to my understanding. The figures haven't been presented, but I understand from what the Secretary has said and from what Dr. South has said that the receipts of the JOURNAL for the last twenty-five years far exceed the expenditures on the JOURNAL in the last twenty-five years. If that is the case, we still owe the JOURNAL money, and we are not paying anything on the JOURNAL when the advertising doesn't come up to the output for any particular year. I believe that the managers of the JOURNAL should be encouraged to go ahead, not to limit it, not to cut it down, not to cheapen it in its physical dress, but to keep it up to a high standard.

W. B. ATKINSON, Campbellsville: Mr. President, I have a suggestion on the advertising, that the Business Manager of the JOURNAL cause to have printed and distributed to the doctors of the state, some little stickers saying, "Do you advertise in the Kentucky State Medical Journal?" and whenever we pay a bill for any of our professional supplies we can stick a sticker right on there. I believe if you would put those things on there, there would be rush for space. (Applause)

PRESIDENT BARBOUR: That sounds like a good suggestion.

SECRETARY MCCORMACK: I am very glad indeed that Dr. Scott said what he did. Dr. Simmons, the great Editor of the AMERICAN ASSOCIATION JOURNAL, who created its greatest value, always insisted that all of the advertising income should be used for the support of the JOURNAL and that at least twenty-five per cent should be added to that by those who were the recipients of the JOURNAL, and I think Dr. Scott is exactly right about it.

I don't like to disagree with Dr. South, because I generally find she is right, but I particularly disagree with her in the suggestion that there should be any abridgment of the discussions. Any abridgment that should take place should be in the paper, and the discussions, which are of the greatest value, should be published in full. I believe short papers and spirited discussions make for interest in the meetings and make for interest in the JOURNAL. Of course, I think we could omit many of the complimentary statements we make about this really being the best paper we ever heard on this particular subject, and things of that sort, because they are mere verbiage that is put in in order to keep things going smoothly, but the actual discussion of scientific subjects is of enormous value to every meeting.

C. A. VANCE, Lexington: Don't you think the discussions should be limited?

SECRETARY MCCORMACK: I think there really is less cause for complaint than it sounds like there is. The purpose of the JOURNAL is to give those thoughts and those practices that each of you have found satisfactory in your work, that will be of general value. As long as we continue to make our JOURNAL serviceable to the profession I really think that the Council, in building up the reserve that we have, has done it with this idea in view: that during times like this we will continue to carry on and carry on effectively. We have been extremely fortunate in the patronage of our advertisers as compared with most of the state journals. We have had a larger proportion of our income from our advertisers than any other state journal, and that has been a source of great satisfaction to us, because it means that our readers read those advertisements and patronize those firms. That is the reason we have gotten more income than most of the states.

Our dues are lower than most states, and I hope we can keep them that way, but if there should be any question about it, I think it would be far better for us to pay more and have a better journal than to pay less and have a worse one.

PRESIDENT BARBOUR: Next is the report of the Auditing Committee, T. J. Ray, Chairman.

T. J. RAY, Lexington: Mr. President, your Committee desires to report that it has examined the accounts of the Secretary and the Treasurer as published in the JOURNAL and

audited by B. P. Eubank, Auditor, and finds the same correct.

(Signed) T. J. Ray, Chairman
J. B. O'Bannon.

President Barbour: Report of the Committee on Legislation and Public Policy, Irvin Abell, Chairman.

Secretary McCormack: In the absence of Dr. Abell I have this report:

"Your Committee begs to submit a few remarks upon the report of the Committee on the Cost of Medical Care, presenting as it does a vitally important problem in public policy. The 'Costs of Medical Care' or the 'High Costs of Medical Care', as some quote it, carries inferential insult to the members of this Association who know that they give much of their time to free or inadequately paid service to the indigent and to those of moderate means. The fact that of the ninety billions of our total national income in 1929, only three billion four hundred thousand dollars went to pay the health bill, that physicians got less than one-third of that, and that in the same year one billion eight hundred million dollars was spent for tobacco alone, is comparative evidence the people at large are not rating health above luxury.

"The medical profession, particularly that of Kentucky, true to its heritage, has always exerted every effort to protect the lives and health of our people by every scientific means at its disposal and will continue to do so, while rightfully resenting the suggestion or effort to place the dispensation of medical care under a state or centralized control. Knowing the situation as no other body of men can know it, it looks to its own leadership in correcting evils in practice as they arise and in making satisfactory and adequate provisions for caring for those whose destitution may lay claim upon its largesse. The municipality offers elaborate hospitalization to sick free or at less than maintenance cost, but makes no provision for the remuneration of the medical servant. The state requires a most expensive educational equipment in the privilege of serving the sick, but offers little in the way of protecting that educated servant.

"The suggestions made by the Committee on the Cost of Medical Care for such compensation are entirely unacceptable if the profession is to continue adherence to its high ideas and to its traditions. The factual data accumulated by the Committee cover every phase of medical activity and should be invaluable to the profession in formulating policies which will offset and correct the erroneous deductions and recommendations made by it.

"Its first recommendation, group service supported by insurance and taxation, is subversive, first, of the individual, man-to-man interest which has made the general practitioner the bed-rock of the profession, and, second, of the initiative which has proved a wonderful incentive and stimulus in the application of scientific knowledge to the cure and alleviation of disease. The evils that would necessarily arise from what would eventually become a quasi-political control of medical practice would prove destructive of the ideals which have made the medical profession second in importance and practice only to that of the ministry.

"Industrial medical service has already become an important and integral part of medical care, as many as two million people in this country now receiving all or part of their medical service through it. The fundamental principles which must underlie such distribution in order to make it acceptable is that every dollar collected for such purpose be expended for medical care and none diverted for profit to the organizers and lay distributors, and that the unethical features contrary to the good both of the profession and the people be eliminated. The recommendation regarding public health service is to be commended with the provision that its activities be restricted to purely public health measures without encroachment upon the prerogatives of private practice.

"The recommendation of the Committee that the study, evaluation and coordination of medical service be considered important functions for every state and local community is commended, but your committee insists that the medical profession of every state and local community constitute the only group possessing the requisite knowledge to approach this study in an intelligent manner, and that consequently the profession must assume the leadership in solving the problems which such study brings to light. The profession has never yet approached such problems in a spirit of self-aggrandizement, nor will it now do other than consider them with fairness, altruism and humanitarianism. The recommendation regarding the amplification of the education of the various personnel concerned in the distribution of medical care may be endorsed in principle as representing a goal to be sought.

"Recommendation No 1 of the minority report is commended in toto.

"Recommendation No. 2, that 'the government care of the indigent be expanded with the ultimate object of relieving the medical profession of this burden', is objectionable because of its paternalism and because of the

abuses which it would inevitably engender.

"Recommendation No. 3 is commended.

"Recommendation No. 4, that 'the general practitioner retain a central place in general practice', in the opinion of your committee represents a fundamental fact that must be apparent not only to every member of the profession, but to every member of the allied groups concerned in the dispensation of medical care having at heart the welfare of the people whom we serve. Your attention is directed to the action taken by the House of Delegates of the American Medical Association at its last meeting looking toward the establishment of a standard in the various specialties to be attained by those desiring to qualify as such. Specialization has apparently overgrown reasonable bounds because of too many recruits, with too little background of fundamenal medical knowledge and too little real education in their limited fields. The action of the House of Delegates above referred to is the beginning of an effort to correct this situation.

"Recommendation No. 5 condemning the corporate practice of medicine is commended with reservations. Such practice on the part of lay organizations is purely and simply commercialization of medicine and should not be tolerated. Such practice on the part of hospitals is an exploitation of its staff members and consists in the selling of services by an institution which the law permits only to be rendered by an individual who is duly licensed to deliver and charge for such service. Such practice on the part of medical schools is to be condemned except in so far as relates to the care of the indigent. The social service department of such medical schools should be held responsible and accountable for imposition by those able to pay for medical service.

"Recommendations No. 6 and 7, that 'careful trial be given to methods which can rightly be fitted into our present institutions and agencies without interfering with the fundamentals of medical practice,' and that 'the development of plans for medical care be undertaken by the state and county medical societies,' are commended. The reasons advanced on page 180 of the minority report for favoring a trial of the county society plan for furnishing medical care are logical and in harmony with the ideals of the profession, while the safeguards given on page 179 insure plan to be both ethical and compatible with sound public policy."

Mr. President, I move the adoption of that report.

The motion was seconded, put to a vote and carried.

SECRETARY MCCORMACK: I move that we adjourn until seven o'clock.

The motion was seconded, put to a vote and carried, and the meeting adjourned at five-thirty p. m.

## MONDAY EVENING SESSION

SEPTEMBER 11, 1933

The second session of the House of Delegates convened at seven-thirty o'clock, the President, Philip F. Barbour, presiding.

PRESIDENT BARBOUR: We will have the roll call.

Secretary McCormack called the roll.

SECRETARY MCCORMACK: There is a quorum present.

PRESIDENT BARBOUR: Minutes of the previous session.

J. DUFFY HANCOCK, Louisville: I move they be dispensed with.

The motion was seconded and carried.

PRESIDENT BARBOUR: Report of the Committee on Publicity, E. D. Covington, Chairman.

E. D. COVINGTON, Murray: Mr. President and Fellow-Members of the State Medical Society: In this report I don't have very much to say except that the editor of our local paper and the journalist here at the College have been on the job for the past three weeks giving all the publicity that could be had to this meeting.

On that committee with me are Dr. Houston and Dr. Hart, and some of our very prominent women who have been on the job at all times.

We welcome all of you and will do all in our power to make this gain all the publicity possible and that is due it.

Furthermore, we want to say, in passing, that down in town we have some good eating places, and you will find them second to none. If you happen to be down there you can visit some of them.

PRESIDENT BARBOUR: If there is no objections the report will be received and filed.

Report of the Committee on Scientific and Commercial Exhibits, V. A. Stilley, Chairman.

V. A. STILLEY, Benton: Mr. President, the report of the Secretary fully covered the report of this Committee. In a sense, the scientific exhibits have been small, but still they are worth our while. I think it is due the members of the society that each one of us patronize and look over these scientific exhibits. Ordinarily, of course, we have a great many more exhibitors than we have at this time, but the few we have it will be well worth our while to see.

I am going to answer Dr. Covington about

the "eats." He may say there are good places down in town, but none will compare with this place we have had tonight.

PRESIDENT BARBOUR: If there is no objection the report will be received and filed.

Next is the report of the Committee on the Woman's Auxiliary, Mrs. A. T. McCormack, of Louisville, Chairman. I will ask Mrs. Houston and Mrs. Hendon to escort Mrs. McCormack to the platform.

Mrs. Hugh L. Houston, Murray, and Mrs. George A. Hendon, Louisville, escorted Mrs. A. T. McCormack to the platform.

PRESIDENT BARBOUR: I am glad to present Mrs. McCormack, the President of the Woman's Auxiliary. (Applause)

MRS. A. T. MCCORMACK: Humbly, yet with hope for your generous judgment and continued patient instruction, I accept the proud privilege of submitting for your consideration the annual report of the President of the Woman's Auxiliary to the Kentucky State Medical Association.

In numbers we are few in the Auxiliary, too few, but we are earnestly attempting, through various avenues open to us, to further your work as an organized body in Kentucky. On December 31, 1932, at the end of our fiscal year, we numbered 284 paid members. Our finances, although limited, show a savings account of $57.98, with $44.58 still frozen in a closed bank. In general administrative fund we have a bank balance of $90.10, with all bills paid to September 8, 1933. If the wives, daughters, mothers and sisters of the 1800 members of the Kentucky State Medical Association were all affiliated with us, what a powerful group you would control among the women of Kentucky!

You understand, of course, that Kentucky is but one of the thirty-eight states in which the Auxiliary is organized. Originating in Texas in 1918 the Auxiliary was first organized to help meet the changing conditions of the times which ushered in new healing cults with a flair for widespread, colorful, loud and arresting advertising, bringing gross misrepresentation of the medical profession and bewilderment and confusion to the suffering people seeking relief and cure for bodily ills.

The total medical Auxiliary membership in the thirty-eight states and the District of Columbia was reported as 14,033 at the last annual meeting of the American Medical Auxiliary held in Milwaukee, June 12-16, 1933. I was privileged to attend this convention with about 2,000 other members from the several states. In Texas, the membership is over 1800, and in Pennsylvania it has passed the 2,000 mark. Kentucky, usually ahead in all progressive activities in the medical field, has lagged behind in Auxiliary membership. Why? Kentucky women are just as capable of organized activity as are the women of any other state. And certainly we have a better medical profession with which to ally ourselves.

May I not here express the hope that each of you will urge your wife, daughter, sister or sisters and mother to join the Auxiliary at once, if they do not already belong, and help, through the Auxiliary, to foster friendliness among the families of physicians as we try to develop understanding and favorable public sympathy for the whole medical profession. The Woman's Auxiliary is the medical society's ethical defense against quack propaganda and pseudo-medical advertising in all its forms. You have heard of the three quickest means of communication—telegraph, telephone, and tell-a-woman. Think what you could do with approximately 3,600 of these instruments of rapid communication, all tuned to carry your message!

We do it in various ways, as you doubtless know. One of our best and widest avenues of approach is through our women's organizations, clubs, P. T. A., and church groups. To be your messengers, carrying truth not garbled fancies, we need facts. Those facts we glean from you at the dinner table, between calls, any time we can catch you. But often you are too busy to give us all the education we need. So we have turned to study classes where we study authentic, easily comprehended medical and health facts from Hygeia, American Medical Association Bulletins, the Medical and Health Laws of Kentucky, tuberculosis literature supplied by the Kentucky Tuberculosis Association, Maternal and Child Health leaflets from the State Board of Health, the Monthly Bulletin of the State Board of Health and the White House Conference reports.

We are training ourselves to know medical truths so that we can answer intelligently the numberless questions of our friends who believe that being the wife of a physician is proof positive that we know, naturally, all about diet—thinning and thickening, infantile paralysis, measles, allergic therapy, or what-have-you! Of course, we never will learn all about any one of these things. But, sandwiched in with the club programs, tea parties and bridge games, we are learning how to keep medical quacks from the lecture platforms of our clubs and we are saying over and over, "See your family physician," and "It pays to have a health examination by your family physician once a year at least."

And we are trying to make our acquaintances understand your professional ethics—not always a simple task in this commercial era.

Study Classes: In one county the Auxiliary has been studying The Doctor in Literature through book reviews, beginning with Dr. Oliver Wendell Holmes, who discovered the cause of puerperal fever, and Dr. William Grenfell of Labrador fame. These periods of study are followed by fifteen minutes of a resume on current events, emphasizing recent happenings in the field of medicine and its allied sciences.

Radio. Talks prepared by Kentucky physicians are furnished each month by our Radio Chairman to three broadcasting stations, Covington, Hopkinsville and Paducah.

Hygeia. That we secure Hygeia subscriptions is the request of the American Medical Association. Our Hygeia Chairman was effectively active until illness halted her efforts. The county chairmen have found it difficult to secure subscriptions during the past year. May I not, again, urge each of you physicians and your friends to send your subscriptions to Hygeia through the Auxiliary? Each county Auxiliary has a Hygeia Chairman. A generous commission is allowed the Auxiliary, $1.25, on each subscription, and this part of your subscription price may be kept in Kentucky, if sent in by our Chairman, and spent here by the Auxiliary.

Historical Collection. Our search for medical historical facts and biographical sketches continues. We have a collection ready for you when you wish it.

Maternal and Child Health. Interest in maternal and child health was stimulated by the Kentucky Unit of the White House Conference held in Lexington, October 28-29, 1932, and by the Blue Ribbon Child activity in the schools under the Bureau of Maternal and Child Health of the State Board of Health. Most of the Auxiliary activity in Child Health has been done through the P. T. A.

Sewing Units. The philanthropic work of making hospital supplies and garments for the underprivileged has been carried on by two county Auxiliaries.

Tuberculosis. The study of tuberculosis in Kentucky, our new project this year, has gained considerable headway. County Chairmen have been appointed in four counties. Particularly active has been the Perry County Auxiliary, where a committee of three, acting with a like committee from the medical society, stimulated a good deal of local interest through an essay contest on tuberculosis in the public schools, with the winning essays published in the local newspaper. This Perry County Committee is also attempting to stimulate a state-wide movement to secure, through legislative action at the General Assembly scheduled for January, 1934, additional free beds for the care of tuberculous patients. The definite suggestion is that all of the eighty-two beds at Hazelwood be made free beds through adequate state support.

Jane Todd Crawford Memorial. Interest in the Jane Todd Crawford Memorial project continues to grow. Some additional historical data has been secured. Our Memorial Fund now totals $610.82. Another practical and serviceable memorial has been established in Kentucky. The Woman's Club at Greensburg opened the Jane Todd Crawford Memorial Library in the Old Court House in Greensburg during Book Week in November, 1932. On June 3, in company with Auxiliary members from three other counties, I enjoyed the privilege of attending a Book Lovers' Tea at the Jane Todd Crawford Library, when representatives from six counties added 125 books to the library shelves.

In March, with the approval of the State Superintendent of Education, reference material (minus all technical procedure regarding the operation), together with an essay outline, was placed in the schools of Green, Taylor, Marion and Boyle Counties, through which the Jane Todd Crawford Trail passes. Essay contests on the Jane Todd Crawford Trail were the result, with Marion County presenting the first essays. The high school winner broadcast his essay in person over WHAS and the grade school winners's essay was published in the local newspaper.

At A Century of Progress in Chicago two exhibits feature The First Ovariotomy—the American College of Surgeons and the Mayo Clinic Foundation, both in the Hall of Science.

Survey. Following the survey last year of the first decade of the Auxiliary, our Executive Board found symptoms indicating conditions that called for radical procedure, and courageously attempted to administer the necessarily severe treatment. Accordingly, revisions were made in our Constitutions and By-Laws, most important of which was the change in our fiscal year to correspond with that of the Kentucky State Medical Association, January 1 to December 31. On paper we recorded thirty county Auxiliary organizations, with a total membership of 750. Actually we found but eight active county Auxiliaries, with only 284 paid members, at the close of our fiscal year, December 31, 1932. Dues are but $1 annually. Women

who signify a desire to be listed as members but pay no dues are no longer counted members. Many had been carried thus. But as our national body, the American Medical Auxiliary, requires a twenty-five cent membership fee on every state member, our treasury can no longer stand this strain constituted by unpaid members. Consequently, only paid-up memberships are now counted. Then, too, we found but eight active county Auxiliaries among the thirty listed. Here again money talks. For each county Auxiliary the Southern Medical Auxiliary requires $1 dues. So now we list but the active counties, eight in number. However, although lacking quantity, we know we have quality, and like the finally selected army of Gideon, these 284 members in eight county Auxiliaries can be depended upon to make good use of their weapons. May I carry this thought a bit further and liken Gideon's pitcher to your protecting counsel and instruction—the torch, visioned as the light of sound health teaching and the trumpet, heard as the voice carrying your helpful message to the people. With this active, interesting group as our nucleus, may we not hope, with your help, to increase our membership and add to the number of active county Auxiliaries during the coming year?

Budget. The budget system has been given its first unofficial try-out for our accounts, and we plan to adopt it as a part of our administrative procedure.

Records. The card file record system and the treasurer's receipt blanks required by the American Medical Auxiliary have been adopted by most of the county Auxiliaries.

The Quarterly. Publication of the supplement to the KENTUCKY MEDICAL JOURNAL has been continued, at your request, financial support being provided by the advertisements secured by members from friends in the commercial field. This financial support, remarkable for a new undertaking during these past two years, is, we Auxiliary members believe, a real tribute to you physicians, demonstrating in no unmistakable form, that of dollars-and-cents, the high regard in which the business men of Kentucky, particularly in Louisville, hold the entire State Medical Association. The compliment evident in this demonstration of our business friends really belongs to you, the owners and publishers of the parent volume, the Kentucky Medical Journal. It is your integrity, your strict adherence to ethical conduct, which has made it possible for us to secure this extraordinary cooperation at this uncertain time in business economics.

Donations. Donations, mostly of $1 each, total $48 for the year. Most of these donations came from Auxiliary members outside of Kentucky. No financial support from the Auxiliary treasuries has yet come to The Quarterly except Perry County, where the Auxiliary donated $5 and the Perry County Medical Society donated $5.

Membership dues make no contribution to The Quarterly. Advertisements and donations constitute its sole support. The problem of how best to spread the responsibility of this project to all the members has arisen, for it is manifestly quite unfair that the few who have secured the advertisements during the last two years, should be required to continue to shoulder practically the whole load.

Change of Name. With new deals and codes dizzily succeeding each other, we are confronted with postal requirements which mean a change in the name of our publication. Since we are a supplement or a section of another publication, we must so indicate it in our title, Uncle Sam says. We are to be known hereafter as The KENTUCKY MEDICAL JOURNAL, PART 2, WOMAN'S AUXILIARY SECTION, according to the latest decision of the postal authorities. So do not be surprised when you see this title appear where THE QUARTERLY used to be when you open your JOURNAL envelope in October, January, April and July. And may I again urge you, when you have read the Woman's Auxiliary supplement, to please take it home to your wife? It belongs to her and to the other women members in your family. Your wife is your supplement, she belongs to you. The KENTUCKY MEDICAL JOURNAL, which is also yours, has a supplement, but it belongs to her. Give it to her and encourage in her, as an active Auxiliary member, that pride of actual, conscious ownership in this manifestation, recorded in black and white, of her—your Supplement's—evident interest in you and your chosen life work. We want her to feel that same pride of participating ownership, that same sense of responsibility in the SUPPLEMENT which you have in the JOURNAL. She cannot do this unless she pays her dues and aids personally in the intellectual and financial support of the SUPPLEMENT.

The development of this publication has been an outstanding experience for each of us who have taken any part in it. It has proved a liberal education in journalism. Also in financing, for although our total budget is approximately but $1,000, keeping accurate records of the many small accounts has sharpened our wits. Finding an elusive six cents takes quite as much patient, persistent

hunting as would a larger sum! And columns of figures simply will not balance with even one cent missing. You will rejoice with me, I am sure, when I tell you THE QUARTERLY accounts do balance. Our Business Manager, Mrs. Curt H. Krieger, has given faithful, unselfish service and done her work in an efficient manner comparable to that of an expert. Your attention is respectfully called to the audit for each year found in the October issues of our SUPPLEMENT TO THE KENTUCKY MEDICAL JOURNAL. All of our bills are paid to date. There is a small bank balance of $25.48, and we have $317.53 on our books for collection.

Timidly, but from a sense of duty, I have ventured to give you this rather detailed picture of the minutiae of the structure and the functioning of our organization, because I know from your strict adherence to asepsis in surgical procedure how just a valuation you place upon little things, and it is the little things that make or break every undertaking. I know, too, your exacting requirements in the detail of organization and functioning of the Kentucky State Medical Association. I hope, and in this I express the desire of our entire membership, that each of you members of the Kentucky State Medical Association will take as keen an interest in the organization and functioning of the Auxiliary as those few of your number who have patiently, seriously counseled with us and encouraged us to continue in your service. They have been generous with their time, helpful and gracious in their decisions.

Throughout this past difficult year, filled with problems involving existence itself for all organizations, your Auxiliary, strengthened and stimulated by your buoying support, has weathered the buffeting storms of discouragement, and emerged, we believe, a stronger, more united organization, fully determined, to the best of our ability, to help you carry on in any and in every way you wish us to serve with you. We are yours to command. We believe in you, the Kentucky State Medical Association. (Applause)

PRESIDENT BARBOUR: Mrs. McCormack has given us a wonderful picture of what our wives and daughters—she didn't mention sweethearts, but I guess she doesn't exclude them among the younger generation—do, not only for our Kentucky State Medical Association, but, for the Woman's Auxiliary. It is a marvelous accomplishment. I believe that some of the doctors have attended more regularly since their wives have been coming along with them. They are a little bit more attentive and stay closer to home when they are here.

SECRETARY MCCORMACK: The talking member of my family has already said all we know on this subject, and it is with some hesitation that I discuss this most important matter at all, but I want to say to you very seriously that I don't believe that anything we have attempted to do is of more importance than for us every one to get squarely behind this educational organization that can carry our message to the people who don't know.

You can give your own patients all that you have that is of value, and according to the ancient tenets of our profession that was all we were called upon to do. But we have a far greater responsibility today, especially in Kentucky, because the people of this state have put squarely on our shoulders absolute and complete responsibility for public health and medical service to all of our people. All of the real knowledge that they are going to secure to be given to them under our whole plan, both of medical organization and of state legislation, by the medical profession.

We passed a resolution this afternoon in regard to medical economics that was a very important resolution. We maintain by formal resolution of this great organization that we are the body that has the accurate knowledge, that we are the ones to come to for the information necessary to make people healthier, to keep them healthier, and to get them well the best and quickest way when they are sick. Having that information on our hands, are we to be like the banks that have horded their credit so that commercial business is stagnated, or are we to give that information out so the public can secure its benefits and can know the things they need to know in order to best use the services which we have to render.

Our women are interested in us; they are bound up with us; they are ready and anxious to do this work. I don't mean by that all of them; of course a great many of them are better bridge players than they are wives, a great many of them are not able to do any thing that is particularly useful but lots of us are not either, and yet we are members who can help to back up those who are of some account. In the same way every woman in the state who is interested in the welfare of her husband can certainly afford to give her support to an organization that is carrying on in his, and our, interest and that of the profession.

I know the confidence you have in me. You have shown it repeatedly. Yet I sometimes feel very much discouraged when I go to some of the best of our organizations that are functioning best from a purely medical standpoint

and realize how little public education they are doing, how little they are throwing themselves into the forum of thought and discussion and leadership that we need to have in medicine. It would astound many of you who are so busy with your professional duties, to go to a meeting of a woman's club or a Parent-Teachers Association.

Recently I saw a questionnaire sent out by one of the state medical associations. Copies of it were sent to many of the woman's clubs in Kentucky, and there wasn't a question asked that the woman's clubs of Kentucky hadn't answered twenty years ago. The women have been studying these things, they are ready, they are eager, they are anxious for this leadership. Every woman's club, every Parent-Teachers Association, every League of Women Voters in Kentucky has a committee on these questions. The American Medical Association has said that it and its state and county organizations are the only source that shall control medical service and public health practices. We are not going to be permitted merely to have control of them and do nothing else, and I want to urge you seriously to consider the advisability in your several counties of making such an organization as will enable you to carry the message that we know we have and that we need to carry to all the people that they may know about the value of the services of our great profession.

I want to say just this other thing. I believe the Auxiliary has 284 members. That is more paid members than the Kentucky State Medical Association had, on the average, in the forty-seven years of existence from 1851 to 1898, though it did have more about five different years during that period. The Woman's Auxiliary of the American Medical Association is now about 14 years old. It has more paid members than the American Medical Association had when it had been in existence for forty-five years. There was a larger attendance at the Woman's Auxiliary at the Milwaukee meeting last year than the American Medical Association had had at any time previous to the reorganization in 1903.

Those are interesting facts that show what the women of other states are doing and what our women are doing. I don't believe that these women who are leading this movement should be left by us, because it will be by us if it is done, to represent a small minority of the women of Kentucky while the other states are forging way ahead with their largely increasing and rapidly developing membership.

PRESIDENT BARBOUR: We are certainly indebted to Mrs. McCormack for this account she has given of the work that the Woman's Auxiliary is doing. I didn't know how much it was doing and I doubt that very many of you knew very much about it. It is a very fine work they are doing, and I think we should all get back of it. I will do my part to help my wife in it.

Next on the program is the report of the Committee on Medical Education, John W. Scott, Chairman.

JOHN W. SCOTT, Lexington: Mr. President and Gentlemen: Your Committee on Medical Education in 1931 called attention to the over-emphasis in pre-medical education on subjects more fully and usefully treated in the medical school. This condition still exists. The responsibility for it is not easily placed. In the case of our own state university the authorities believe they are providing the kind of training in the pre-medical years which the medical profession prescribes. Our colleges should be reminded that the requirements of the most discriminating of our medical schools call for a limited amount of subjects applicable to a scientific as opposed to a general cultural training. Such subjects are: One year of physics, a certain amount of chemistry, a year of biology, and some embryology. The inclusion of histology, osteology, endocrinology and other such subjects is apt to be not unwelcome to ambitious department heads who teach these subjects, but lack other support.

We believe that whatever time is available in the pre-medical years for work beyond the actual requirements referred to would be better spent in cultural studies than in further technical work. Your Committee recommends that a copy of the foregoing part of this report be sent to the presidents of the colleges of this state.

This same principle may be applied to training in the medical colleges themselves. The student should be taught to think clearly rather than to use his hands skillfully. The object of all education is to lead the student out of ignorance, to develop intellectual curiosity, to guide and cultivate his mind so that he may be able to discriminate the good from the bad. These are equally the objectives of medical education.

Vocational training, on the other hand, is the preparation for a trade. It consists in the conditioning of reflexes rather than the development of the judicial, the reflective or the analytical faculties. Medical education thus far has been a peculiar mixture of both types of training since the doctor must practice both an art and a craft.

It is important that our medical colleges avoid degenerating into trade schools, losing sight of the true reason for their existence,

that of leading the student out of ignorance into knowledge. With such knowledge of the natural history of disease, with his mental faculties trained, he will be an educated physician. Without this training, mere technical skill is perhaps a menace rather than an advantage to the people he serves.

The generally recognized necessity for one year's hospital interneship before undertaking practice is based on these principles. Skill in action must come after ability to think clearly and to discriminate accurately has been acquired.

We trust that our medical schools will not burden the student in his undergraduate years with what belongs in this year of interneship, depriving him of the full opportunity to obtain true medical education.

Your Committee did not include in this report, the approval which it feels heartily of the plan for postgraduate medical education, in view of the fact that you have a committee on that subject, Mr. President. If a committee is discussing medical education perhaps that should be included, but we felt that was not to be included in this report on that account.

Mr. President, in view of the fact that this report includes certain recommendations for action, I take the liberty of moving, since I am sponsoring it, and to expedite matters, that it be adopted as the sense of this House.

The motion was seconded.

J. W. Scott: Mr. President, the Committee would very much like to have discussion on that report, because if there is opposition to it we would certainly like to know it, and if there isn't, I hope it will have some influence with our schools in revising these trade school ideas that they have in the pre-medical years.

President Barbour: You mentioned three subjects.

J. W. Scott: We mentioned as a general principle, Mr. President, that there are certain clear-cut requirements in most medical schools, for a year in physics, perhaps a little more than that in chemistry, a year in biology, and most of them want a little embryology, not much, and a little bacteriology; that anything beyond that is not desirable, but that time, if it is available, should be spent upon cultural subjects rather than upon subjects like osteology and histology and endocrinology, which, of course, is an absurd suggestion but it has been included in our own state university's premedical course.

President Barbour: Very few graduates know much about endocrinology.

You have heard these recommendations of Dr. Scott. Does anyone want to discuss them?

George A. Hendon, Louisville: Mr. President, not being a delegate I don't think it is a proper thing for me to enter into the discussion.

President Barbour: Any member can discuss it. The action, of course, will be the action of the House of Delegates.

George A. Hendon: If I understand Dr. Scott's recommendation correctly, he has proposed to eliminate from the program of pre-medical teaching some of the actual medical subjects in the interest of an increase in cultural training.

I haven't enough knowledge of either one to take any decided stand on the matter, but I have probably what might be termed a reflex sensation regarding the subject, that is, I think below my cerebellum that my reflexes are that too much time cannot be placed upon medical subjects at any period in the life of any individual that expects to become a doctor.

Now my feeling, frankly stated, is that medical training should begin just as soon as a boy has made up his mind that he is going to study medicine, and that all other culture and all other cultivation should be secondary to that dominant idea. I realize that those sentiments are in direct opposition to the statement that Dr. Scott has made, but it is free and untrammeled expression of ideas that provokes progress.

President Barbour: We have two sides of the dilemma now, gentlemen.

R. Emerson Smith, Henderson: I didn't want to get pulled into this. There are two phases to every question, they say. One of the most embarrassing things is when you start a medical class the first year of medicine and tell that class to make a 30 per cent solution and you give them a 15 per cent solution to make it, or you give 20 grains of something and tell them to make a dilution, 15, 20, 30, and 45, and then have the student come back later and tell you: "Well, I just don't exactly understand it."

I think Dr. Scott is perfectly right. If we are going to have an educated medical fraternity we have got to have educated men in it. It is remarkable how some men have the instinct for disease; it is almost like the instinct of a hound for a rabbit, but those men are exceptions. Every man that graduates in medicine is not a physician, nor is he a surgeon. Many of them would be a great deal better if they were cracking rocks on a turnpike, and the course that they take before they enter medicine should help eliminate that type of man from the practice

of medicine, from our profession, and he will frequently find that he is not fitted for it.

In our universities there are committees whose principal duty is to try to find out what those students are doing the first six months or three months in their medical studies or any of the other professional schools, and they can go to that student and tell him: "You are not fitted for medicine. Your mind may be legal or you may have a definite trend for engineering or something else, but we are certain that you are not fitted to practice medicine." I know of five lawyers today who are standing at the very front of their profession who started medicine, and I had the disagreeable task of telling them that they were not fitted for physicians, and they went into law. Those men have made a success.

Another thing I think we frequently overlook is that many a time a boy goes into a profession (I have three at home and one at college now), and it is has been a task for the last six years to try to find out just exactly what those boys want to do, what they are fitted for. We have to watch the individual and see whether his coordination, mental and physical, is that of a physician; sometimes that is in the blood and sometimes it is not. We frequently fail to realize the fact in the child if he has the opportunity to study and to broaden his mind and to get the fundamental principles of a good college education and of the fundamental subjects, and I think it is a great pity that Latin and Greek have been taken out of our curriculum. Many a word have I been able to remember on examination, and when I stood the Federal Board examinations there were twenty-two words that if I had not known enough Greek to be able to dissect I would have missed the questions. We have about 82,000 words in our medical dictionary that are directly from the Greek and not from the Latin.

We fail to know and to realize that the child's mind is developing by having a good sound college education before he goes into medicine, and frequently he finds himself while he is preparing for medicine. I think the great pity is that our universities do not require, Mr. President, a Bachelor's degree either in science or in arts.

PRESIDENT BARBOUR: After Dr. Gillim, I will ask Dr. Horine to speak.

P. D. GILLIM, Owensboro: I don't feel that I can add anything to this discussion. I find some few remarks that all the gentlemen have made that I disagree with.

EMMET F. HORINE, Louisville: Mr. President, I didn't know I was to be called on. This subject is really quite close to my heart. I personally feel that too much attention is devoted to some of the laboratory subjects and not enough to actually making observing men. I think that the individual going into medicine must primarily get the cultural side of life. He must develop a certain philosophy, he must understand psychology, and various other things that he isn't going to get in the laboratory, and he isn't going to get it going over things that will help later but not primarily broaden him, so I must approve heartily of the Committee's report and personally would vote for it.

SECRETARY MCCORMACK: Mr. President, permit me to say just a word before you close the discussion. I want to appear as a Methodist ought to, out of experience, because I have felt that I have had the very distinct advantage of being guided in my education by a master physician. Father let me roll bandages and he let me wash his instruments and do a few things around the office, but he never let me open a medical book or make a study of any subject that he knew pertained to medicine until I went into medical school. He said he considered my preliminary education important and he hoped I would learn where to find facts and how to reason from them, and if I did that I could study in a medical school and learn the intricate art and science of medicine; if I didn't know how to reason it didn't make any difference how many facts had been stored away in my brain, I wouldn't have any use for them and wouldn't know what to do with them. I am grateful to him constantly for the type of education which he gave me.

I believe that every man who is going to practice medicine in this day and time should have a tremendous knowledge outside of the limited field of medicine. I think the difficulty is that if we start the boy, teaching him biology and chemistry and the other pure scientific background of medicine from the beginning, we are going to narrow him and not permit him to learn the broad sympathies that proper cultural education alone can give him.

As I look back at my studies of Greek and Latin, I realize how little I used them in practicing medicine or how little I used them in public health, yet I believe that the knowledge of those ancient philosophies and their thoughts have given me most of the joy of living and have enabled me to far better do the things that I have been able to do as a practitioner of medicine and as a representative of the medical profession.

I believe that as we develop the study of medicine, the important thing for us to do is to have an educated profession that, when they are in conference or conflict with any

other group of men have a general knowledge, have the humanitarian aspect, a knowledge of psychology and philosophy in the broadest sense, a knowledge of the thoughts and history of men. I think we make better doctors if we have that sort of background, and I hope the time will come before a very great while when the degree that Dr. Smith refers to will be an essential factor before entering upon the study of medicine, and I hope when that degree is required it will not be a merely narrow scientific degree, but will be a degree that is broad enough to assure the cultural background of every man who is to become a student of medicine.

We know how difficult the practical procedure is of excluding from the study of medicine the group of students who desire to study it. They all present evidence that they are ambitious, they want to do the thing, and yet we realize that with the very best methods that have been devised, some twenty-five per cent of those that enter our classes are thrown aside before the first year is over and a considerably larger per cent before the second year is over.

It seems to me if we can have qualified students enter the medical school, that waste of human energy that is now bringing a certain amount of reproach upon our whole system can be avoided, and I believe that the colleges that are preparing students for life are preparing them best, for the entrance into the study of medicine.

I am very heartily in accord with the recommendations of the Committee.

PRESIDENT BARBOUR: The Committee on the Study of Education in England found that the great trouble with education there was that the children were being taught a great number of facts and were not taught how to reason about them. I think that is one of the criticisms of our education in this country, that our men are taught a great many facts, laboratory or what-not, but they are not taught how to think about the facts as they acquire them. Unless you can utilize your facts, what good does it do to know them—unless you can arrange them and pick them out? They are like the multiplication tables, you don't always need them.

J. W. SCOTT: I think the principle that the resolution seeks to enunciate, which has been so well elaborated by these other gentlemen who have discussed this subject, particularly those who support the resolution, is this: that the medical student should have mental training, that he should have a cultural background, that he should have enough knowledge of science to enter properly upon the study of medicine, that he should not have his mind burdened and his time occupied with the study of subjects which are better taught in the medical school and which in fact may be mistaught in the pre-medical years. It is not an uncommon experience for a class in histology the medical school to have more failures among the students who have had histology than among those who have not had histology. I heard a well known professor of anatomy in a school not 500 miles from here say that if he had two students, one of whom he could take, equally qualified otherwise but one of whom had histology and one of whom had not had histology (and histology was this man's subject), that he would select the man who had not had histology.

In other words, the whole point of the resolution, as I have said, is that the sense of this House of Delegates is that the student should have the amount of science which has been prescribed by most medical schools as necessary, that if time is available, the rest of the time should be taken up not with other scientific subjects, but with subjects of a cultural nature.

PRESIDENT BARBOUR: Isn't it a fact that the man who teaches histology doesn't always know best how to teach it?

J. W. SCOTT: That is the point.

PRESIDENT BARBOUR: You have heard the recommendations of the Committee. What is your pleasure?

The question was called for.

PRESIDENT BARBOUR: The motion is that the recommendations of this Committee shall be adopted as our best judgment.

The motion was put to a vote and carried.

PRESIDENT BARBOUR: Report of the Committee on Postgraduate Work.

The Committee on Postgraduate Work begs to report that owing to the financial depression it was deemed wise to omit the two weeks' postgraduate work held in Louisville. There were a number of inquiries sent in about the course, but it was thought that the attendance would not justify the effort that would be necessary and it was also felt that the enthusiasm and cooperation of the University of Louisville would be lessened if the attendance was small. Other postgraduate courses given in other places have had very unsatisfactory attendance.

The plan of extension work as outlined to the Council was begun this year. Under this plan a surgeon and an internist are to be sent out to the various district gatherings and each one is to talk on three or four different subjects, with sufficient time allowed for questions and discussion. The first meeting was held at Cynthiana; Dr. Heudon and Dr. Barbour making the addresses. The atten-

dance was near seventy. Splendid publicity has been secured through Dr. South from the central office and the Secretary of the Harrison County Society. Dr. Wallace Frank and Dr. Morris Flexner gave similar addresses before a group in Harrodsburg where there was even more cooperation, for the newspapers gave splendid publicity to the meeting. We have received a number of letters from men who attended these meetings, speaking very highly of them and asking that meetings be held in other districts. The Committee feels that the plan is very well worth continuing. It is quite flexible and we will learn from experience what will prove the best type of meeting to be held hereafter.

The Committee would like to recommend that the traveling expenses for these trips be paid out of the Association's funds.

Respectfully submitted,
Committee on Postgraduate Work,
PHILIP F. BARBOUR, Chairman
CHARLES W. HIBBITT.

SECRETARY MCCORMACK: I move the adoption of the report and that the recommendation in regard to expenses be referred to the Council for action.

The motion was seconded and carried.

PRESIDENT BARBOUR: Next is the report of the Committee on County Hospitals.

SECRETARY MCCORMACK: I have the report of the Committee.

"Of the 120 counties in Kentucky, about fifty have general hospitals within their bounds. The great majority of these are private or independent institutions, some of which have agreements with the city or county in which they are located, whereby they receive some compensation for the care of charity patients. Fifteen counties have hospitals that are controlled by the city or county or both, including those in Jefferson County and the Marks Sanatorium in Fayette. The problems of the larger institutions are entirely different from those of the smaller, and our report deals chiefly with the latter.

"The small hospitals have never been gold mines, and in recent years most of them have been kept going at a sacrifice to someone. More recently a new pressure has been brought to bear on some of them by nursing organizations attempting to raise the requirements for training schools, that threatens their very life. Your Committee is persuaded that the small hospital is a useful institution, and that the number in Kentucky should be increased rather than decreased. Counties that have no hospital should be encouraged to establish them where conditions warrant. We appreciate the fact that this would be impractical in some localities.

"We recommend that only those hospitals graduate nurses eligible for the degree of R. N. that meet minimum requirements which will assure a high grade nursing service. Other hospitals should establish lesser standards of training that would prepare their graduates for practical nursing, carrying with it lesser privileges and an appropriate title for the graduate.

"We recommend that each of the smaller hospitals strive to reach and maintain ethical and professional standards of excellence as have been outlined by responsible bodies, making themselves eligible for registration with such organizations.

"The organization and administration of such institutions will vary with each locality. The county medical society should endeavor to influence rather than to control.

"We recommend that doctors connected with the smaller hospitals be afforded a better opportunity, within our own state organization, to increase their ability and usefulness in particular lines of work. This could be arranged on an equitable basis by the Committee on Postgraduate Work.

"We recommend to the State Board of Nursing that the smaller hospitals be considered when their standards are studied and adopted.

"J. L. TOLL
G. C. DAUGHERTY
W. B. ATKINSON.
Committee."

JOHN W. SCOTT, Lexington: Probably, Mr. President, neither you nor the House of Delegates will believe me, but Dr. Atkinson has asked me to discuss this report. My natural diffidence would have prevented my addressing the House again, but I feel this is an extremely important report, because it does seem to me that almost the crux or the meat of our situation is the county hospital, that in the rural districts generally the people can be more adequately cared for with a smaller amount of medical service than by any other means that seems to be practical. The county hospital can be equipped with technical help, with laboratory technician, with x-ray equipment and x-ray technician, and the real professional service can be reserved for actual medical work instead of technical work, and it seems to me that is the way to take care of the rural population. Also, I think that any measure which tends to cripple these small hospitals is contrary to the good, the welfare and the health of the people of this state.

One of these measures is the restrictive action of the Nurses' Board of Examiners. (I don't attempt to quote the title correct-

ly, but you know what I mean.) This Board, in spite of all its declarations to the contrary, seems heretofore at least to have had the policy of closing up the training schools which did not meet the requirements in their educational program which were reached by the two or three larger cities in the state.

It seems to me that is entirely unfair. It may be that there is a high standard of nursing education which must be met, which must be complied with. If that is the case, then there should be a second grade, or if there isn't a second grade then I certainly myself would encourage the men in these smaller hospitals to train nurses to their own satisfaction, let them have a degree or not, as they choose, but train them to their own satisfaction, have them do their work, and send them out in the communities equipped to continue to do their work outside of these hospitals.

It seems to me some such measure as that will make the Nurses' Board of Examiners sit up and take notice. It is absurd to say to the men in these smaller communities that they can not train nurses to do their work, that they must accept the nurses trained according to the standards of Louisville or Lexington or Paducah, that they may not use their own standards.

The result is that the nurse who is trained in Louisville and perhaps the nurse who is trained in Lexington refuses to go ten miles to a small town, or forty or fifty miles away. If she goes, she goes unwillingly, and when she goes unwillingly she is apt to say to the patient who is going to be operated upon by Dr. Brown, that Dr. X in the city of Louisville or Dr. Y in the city of Lexington doesn't do his operations that way. I think it is only their preservation, the maintenance of their self-respect, and the making of conditions which enable them to do their work, that prompts these men to demand that they be allowed to train nurses to do nursing in the way they want nursing done.

W. B. Atkinson, Campbellsville: Today the Superintendent of the Nursing Board was requesting that all of the nurses have some experience in mental training, tuberculosis and communicable diseases. I want to add a fourth thing. I believe that every nurse who is going to do general nursing should be required to go out in the sticks with us for about six months. (Applause). Whenever we call for a nurse out of Louisville for Taylor County, they have to call up nine or ten of them before one of them will agree to come, and then that one that agrees to come is perfectly lost in a home out in the country. We can do a whole lot more with an old colored mammy out there, in a whole lot of cases, than with a trained nurse. That is not true of all of them, because there are some trained nurses, as there are some doctors, who can improvise under any circumstances, but you will find that those nurses can nurse in the hospital under any circumstances.

There is a tendency also for nurses who have been trained in one hospital in the city not to want to nurse anywhere but in that hospital, because that is where her friends are to gossip with. I know, because I used to gossip with them when I was in my internship. (Laughter)

I am going to recommend that if they require these other three things, that they also be required to spend a certain amount of time at least ten miles from a drug store and a picture show. (Laughter)

There is also a recommendation for an opportunity for further study. I appreciate and welcome these extension courses as they have been outlined by Dr. Barbour but there is another one that would be even more useful, although not as widely applicable. It would be for our men in the centers to make available to the doctors in the outlying districts an opportunity to come in and to visit with them for a week or two.

Your first reaction will be this: That will cut down on my consultation work. All right, anything that I can learn from you within two weeks is not a subject that requires any extra amount of intelligence. (Laughter) You may find that those things I learn in that time, if I do learn them, which is doubtful, may cut down a little on your consultation, but at least ninety-five per cent of that which is cut down is charity consultation.

Suppose I went in with Dr. Hendon and learned to put in a bone key. Whenever anyone in my section required a bone key and had anywhere from $25 to $50, I would put the bone key in, but if they had as much as $500, do you think I could touch it? Why, no.

I am going to suggest that we take up this matter on that basis.

Last summer I was invited to spend a week in the Julius Marks Sanatorium in Lexington, and I found that the time I spent there was invaluable. They would be glad for any other Kentucky doctors to visit them. I believe if sufficient of the surgeons in Louisville, Lexington and other places would volunteer to have three or four visitors a year come and study with them, and if you are as good a psychologist as Dr. Granville Hanes, you will have no trouble with your patients.

President Barbour: I would like to call

on Dr. Daugherty to discuss this paper.

C. G. Daugherty, Paris: I am very much interested in this subject.

In taking the ground that I am taking I feel that I am a friend of the nurse and the nursing profession, because when we consider the state of finances at the present time, the nurses are having a hard time.

This question originated from the action of a national committee that sent to the heads of hospitals and presidents of staffs a suggestion that they take action that would put a lot of the hospitals out of business so they couldn't graduate nurses because they had so many that had already graduated that didn't have anything to do. Almost everywhere, you know that nurses who have graduated haven't been busy, and the practical nurses and those who don't charge so much have had plenty to do.

This is a question that we couldn't discuss as we should because it was taboo to say anything about the nurse or the nursing profession or their methods; it might react on you and you might not be able to get a nurse if you wanted one. In taking this ground and putting it on a practical sort of basis we are a friend of the nurse, because we are not always going to have boom times when we can pay high prices to take care of the people. We have to get the idea of humanity into this just as we do with regard to medical care. The nurse has to look at it from the humanitarian standpoint.

In Philadelphia the standards for the nurses' training were raised until they had as high standards as those for a doctor. It didn't make any better nurse in the practical care of the patient, and the nurse was required to take so much training that she couldn't afford to nurse unless she had a price that would justify the money she spent on her education. From the practical side so many nurses had been turned down, so many were already out, that it just wasn't possible to support those nurses and therefore they were trying to cut down their number of nurses.

That threatened us and our own hospital at home, in that we were required to affiliate for such a long time that we didn't have the nurse at the hospital at the time that we needed her. We went after them hammer and tongs, and are prepared to use those same tongs and hammers whenever it is necessary to get our rights.

Dr. Scott was called in to help us out in Cynthiana, in Harrison County, with regard to their hospital. When the Nurses Board representative came to us she cooled off a good deal and agreed to do things that were more reasonable.

In order to be a friend to the nurse we should ask that they do not get their standards too high. If it is required that we have a nurse of that standard, we should have a certain designation for that type of nurse. Then we should try to be practical, as we have to be with doctors all over the country, to furnish a doctor to go to the community where he is needed.

With regard to the county hospitals that are not able to maintain that standard, some sort of organization should be made by those that are not able to do it due to the fact that they haven't enough patients and haven't enough material to properly train the nurse, so they can agree with the reasonable requirements of the Board of Nursing and can have a standard and get as good nurses as possible. I don't say we ought necessarily to call her a practical nurse, but we ought to be able to meet that in some way. Independent of that, the hospital should be able to train its nurses for its own local community so the nurses and the hospital will be able to meet the conditions there.

In saying what I am saying I am sure that I am a friend of the nurse as well as of the doctor.

Paul A. Turner, Louisville: I thought I heard wrong when our President told me he wanted me to speak and I don't know exactly the reason. Nevertheless, I have been intimately associated with the nursing profession for a great many years not only as a medical director of a large city hospital, but in association with the organization of the NOPHN.

Years ago this same subject came up in a conversation on a personal matter with the President of the NOPHN in Washington, and she held, as a great many other eastern nurses held, and those in large centers, that their nurses should be graduates of colleges and should have an extensive training in the hospital prior to their even taking the nursing examination. I disagreed with her. I felt that the first essential of a nurse was that she be healthy. Being interested particularly in tuberculosis, I felt that she should have no signs, no symptoms, of tuberculosis, that the x-ray of her chest should be negative. At that time we didn't know so much about bronchial glands, but I go so far now as to say that I think that girl should not have any extensive calcification in her lymph glands in the hilum. There is too much danger of a reinfection in a general hospital as it is generally conducted now, to take the chance of taking a girl in and giving her a training or start the training and then have to put her to bed after she has been there a short time; it is not only

an expense to the hospital, but a detriment to the girl.

Secondly, I feel that the next qualification of the girl is plain, ordinary common sense. Many is the girl that is well trained who has not, the qualifications necessary to take care of a sick person; they haven't the humanity in them to exercise the sympathy that is necessary for a sick individual. I don't say that is a quality lacking in the ordinary nurse. I say that it sometimes the case.

Naturally, it is necessary that a nurse have the fundamental training so she is capable of carrying out the doctor's orders. That goes without saying.

In a county institution, or a state institution like ours, where we have to operate on $2.85 per patient, we can't pay $100 a month to a graduate nurse and give her the keep and laundry and everything that you ordinarily give to a nurse. Futhermore, years ago we had quite a bit of difficulty with the registration of the Nurses' Board. They rather insisted that we have graduate nurses on our staff, to the exclusion of practical nurses. Well, if we had done it we would have been absolutely ruined. We couldn't pay them and make ends meet. Therefore, it was our duty to train practical nurses so they would be efficient in tuberculosis work and give us the things that we required. As a matter of fact, I found that the training we gave them as practical nurses has produced nurses that have been far superior to the graduate nurses that we have tried to put in as head nurses. I really believe the reason for that, however, is because in the general hospitals they don't get any tuberculosis training, so how are they able to give us the things that we demand? In a specialty of that sort we still feel that we can train practical nurses and get by even better than by taking graduate nurses and trying to instill into them the requirements necessary for the tuberculosis nurse.

I am sorry; it is unfortunate that the nurse does not get the essential training in Louisville in tuberculosis. I don't know how it is in Lexington. Right now we are trying to remedy that condition so the nurse will get an essential training in tuberculosis sometime during the course that she has in the other hospitals. I think that is a fine thing and I hope it will be carried out to a real thorough conclusion.

I came in rather late, so I don't know what this report of the Committee really was. I may be talking at random, but from what I have heard of the discussion I feel that there is a place for girls that are not so thoroughly educated, in the sticks as Dr. Atkinson says. If they have the two or three qualifications that I mentioned and are properly trained for their own community, I feel there is a big place for them. I know perfectly well that it is true you can't get graduates in Louisville and Lexington to go to the sticks and stay there any length of time.

PRESIDENT BARBOUR: Dr. Houston.

HUGH L. HOUSTON, Murray: I am not peculiarly fitted to talk on this subject. It is an interesting one. The nurse is something we can't get along with and can't do without. I was told a few times before I had an interest in a hospital that it would be one of my biggest problems. I believe I will subscribe to that.

The training of a nurse is pretty much like the training of the pre-medical boy or girl. I have been more interested in the training of the boy for medicine than the girl for nursing, but I heartily agree with the statements concerning the training of the boy for medicine. I certainly appreciate the broad, cultural background that the boy should be trained in before he takes up medicine or surgery or any branch of the profession. So with the nurse, I think the profession of nursing is absolutely subsidiary and under the care of the medical profession, and when it comes to the front to the point that it suggests to the medical profession what to do and how to do it, I may be just a little too positive but I think they are a little bit out of their place.

The point at issue was emphasized by one of the discussors a moment ago. There are positions for the nurse that require considerable training, possibly equal at times to that of the physician and the surgeon, almost, but the average nurse does not require that much culture. She should be good to take orders and carry out orders, and if there is any failure it is attached to the physician or surgeon in charge, not to the nurse. That is the rule. I don't know of anything I could add to what has been said except to say that, I thing the profession of medicine should be entirely over the profession of nursing, because the work they are to is not initiative in character, it is to be taken from those who have charge, whether it be surgery or medicine, and the best nurse is the one who can carry out the instruction of that doctor the best.

SECRETARY MCCORMACK: Mr. President, it seems to me that this is a matter that should be very carefully studied. I believe it is one of the most important problems that comes before us. I would like to move that the Reference Committee of the House of Delegates be continued during the coming year, with the view of their having such conferences amongst themselves and with the State Board of Nurses' Examiners and other organiza-

tions, as will enable them to make a recommendation to the House of Delegates next year, a definite recommendation that will be of still greater value to us in determining our policy on this subject.

Dr. Atkinson has presented an excellent report that gives us a great deal of food for thought and real ground for action, and I believe that the matter should be carefully studied and that this Committee's very intelligent consideration of it entitles them to the opportunity for further development on the subject.

There are three on the Committee now. I would add two more to it, and make it a committee of five.

C. G. DAUGHERTY: May I add an amendment and ask that Dr. Scott's name be included on the Committee.

PRESIDENT BARBOUR: The motion is that a Committee of five be appointed to report back to us next year.

T. J. RAY: I think Dr. Daugherty's amendment to the motion was that it be a committee of five, including Dr. Scott on the committee.

SECRETARY MCCORMACK: That is accepted.

The motion was put to a vote and carried.

PRESIDENT BARBOUR: Next is the report of the Heart Committee, Dr. Horine, Chairman.

EMMET F. HORINE, Louisville: Correspondence with the various members of the Committee reveals the fact that certain phases of the heart situation should be again stressed. The increase in mortality from heart disease during the past few years is appalling. In 1916, in the United States registration area, the death rate from all forms of organic heart disease was 169 per 100,000 population. In 1929 the rate was 210.8, while in 1930 it was 213.5.

Certain factors explain the increase in mortality, one of the most plausable being probably far more accurate diagnosis. More people are living to the age when heart disease develops, which further explains the increase. Physicians interested in tuberculosis suggest that the mortality from heart disease is readily explainable by the fact that tuberculosis no longer takes its toll and that the patients live to the degenerative heart age. Through control of communicable disease and proper attention to general hygiene, people live longer.

Our study of the incidence of heart disease in Kentucky made over a period of the past several years gives the following figures: hypertensive heart disease, 70 per cent; rheumatic heart disease, 10 per cent; arteriosclerotic heart disease, 10 per cent; syphilitic heart disease, 7 per cent; thyrotoxic heart disease, 2 per cent; congenital heart disease, 0.7 per cent; miscellaneous types, 0.3 per cent.

The Committee believes that the county societies will benefit by devoting careful study to heart disease during the ensuing year. The fact that certain communicable diseases may be prevented, or, if not prevented, the damage to the heart may be minimized by proper treatment and supervision; discussion and recognition of etiological types; refinements in diagnosis and a careful appraisal of the more recent remedies used in the treatment of heart disease, should furnish any society with material for many meetings.

A motion was regularly made, seconded and carried, that the report be adopted.

PRESIDENT BARBOUR: Report of the Committee on Control of Cancer, J. Duffy Hancock, Chairman.

J. DUFFY HANCOCK, Louisville: Your Committee on Control of Cancer, Mr. President and Members of the House of Delegates, is able to present a gratifying report of the progress made during the past year. At the 1932 session, the House of Delegates approved the recommendations made by the Committee at that time. These recommendations were, briefly, that a cancer symposium be held at some time during the year by each county and district society, that the lesion to be emphasized be cancer of the breast, and that the abstracts of these presentations be given to the local papers for publication.

In the following month, McCracken County led the way with the first of such meetings. Subsequently, talks were given at Mt. Sterling, Louisville, Paris, Bardstown, Wickliffe, Somerset, Hopkinsville, Cynthiana, Bowling Green, Lebanon and Hazard. These meetings were all well attended, and we feel that a great deal was accomplished. The Cancer Clinics at the Norton Infirmary and at St. Joseph's Infirmary in Louisville are functioning smoothly, and we hope to see other institutions out in the state qualify for such service.

Since cancer ranks second to only heart disease among the the causes of death, and since it is definitely on the increase, we strongly urge that a continuation of the campaign for earlier diagnosis should be stressed.

Therefore, we make the following recommendations:

(1) That each county society, alone or with its neighbors, have a cancer symposium at some meeting during the coming year.

(2) That your Committee be authorized to cooperate with the American Society for the Control of Cancer in the selection of the general type of campaign to be followed and the specific lesion to be emphasized.

If these suggestions are accepted we will

again endeavor to secure for each meeting the special speaker requested, or to furnish another one if he is not available or if no special one is requested.

We want to thank all who have worked with us during the past year and hope that you and others will help us this year if our recommendations are endorsed.

Respectfully,

WALLACE FRANK, Louisville
C. A. VANCE, Lexington
E. E. ARCHER, Paintsville
A. W. DAVIS, Madisonville
PAUL GRONNERUD, Pikeville
J. DUFFY HANCOCK, Louisville, Chairman.

SECRETARY MCCORMACK: I move the report be adopted and the recommendations accepted.

The motion was seconded and carried.

PRESIDENT BARBOUR: I have here a letter of invitation from the Indiana State Medical Association.

It is dated September 7, and addressed to Dr. Irvin Abell.

"I am writing to you at the suggestion of Mr. Fawcett, Manager of the French Lick Springs Hotel.

"The Indiana State Medical Association is holding its annual convention at the French Lick Springs Hotel, September 25, 26 and 27. The hotel is giving us excellent rates for the meeting, and there is no extra charging for any of the features of the convention, nor those registered there. The rates are $5.00 to $9.00 per day.

"An excellent program has been arranged for the physicians and their wives. We would like for a cordial invitation to be extended to the Kentucky State Association, for our meeting. A guest prize for the best out of the state golfer will be given.

"Would you please see that an invitation is extended to the Kentucky State Association at their annual meeting next week? If it is possible, would you have the Secretary of the Jefferson County Society mail me a list of their members so that I can send invitations direct to the physicians in Louisville.

"Sincerely yours,

"George Dillinger, M. D."

I believe it would be proper to have the Secretary write a letter to the Secretary of the Indiana State Medical Association acknowledging receipt and appreciation of their courtesy.

SECRETARY MCCORMACK: I move we accept the invitation and that the President be authorized to appoint any members who can attend as delegates to this meeting.

The motion was seconded and carried.

PRESIDENT BARBOUR: Report of the Medico-Legal Committee, Dr. Lukins, Chairman.

J. B. LUKINS, Louisville: Our report this year is gratifying from several standpoints. There have been a fewer number of suits filed than in any one year in the last nine years. The percentage of successful termination has arisen within the striking point of 100 per cent.

We have only lost one case by jury trial, and that is now in the Court of Appeals, and there has been only on case compromised and that was a case with peculiar angles and intricate features. Nearly every case filed since my last report has been in the cities and nearly all in Louisville. Since inauguration of the present plan of defense we have not lost a single case in Louisville.

There are now some ten to fifteen threatened cases, most of which will never be filed. One case filed against a doctor was referred to us, but on investigation it was found not to be a malpractice but assault and battery.

There are sixteen cases pending at this time. Twenty-five cases were disposed of during the year.

One was dismissed for lack of prosecution.

One was dismissed by the plaintiff.

Four cases: peremptory instructions were given in favor of the doctor. There was one case, a very mean case, of Volkmann's contracture in a child that was dismissed on peremptory instructions. The case was later renewed, and after a trial lasting two days a direct verdict was given the defendant. This case was vigorously prosecuted by the plaintiff.

There was another case in which the patient fell or jumped out of the window of the hospital. We were albe to obtain in this case a unanimous verdict for the defendant.

One of the cases in which peremptory instructions was given for the doctor was that of removal of turbinates in which he failed to make a coagulation test. Death resulted from hemorrhage, but the court held that the doctor was not to blame.

Many of the cases this year have simply been a counter-claim filed when the doctor tried to collect his bill In one of these cases the claim against the doctor was dismissed and judgment for the full amount of the bill given.

The compromise case in which $1250 was paid by the insurance company was against four doctors, a trained nurse and the hospital. This was a case in which the defendant's leg between the hip and knee was burned by the electric cord during a cystoscopic examination.

Perhaps the most spectacular malpractice suit ever filed in Kentucky was that termed Rose against Crowley. This was a case of Judge Rose who was the presiding circuit

judge at Williamsburg, Kentucky, against three doctors in his own town, five or six in Lexington, and four or five in Louisville. Politics, banking, domestic relations, private diseases, were all called into play in this case and each used for all it was worth. This was for 150,000 dollars and was a hard-fought case, although some of the defendants hardly knew it was in progress. We won all cases in the Circuit Court and in the Court of Appeals on a question of law. However, the Court of Appeals, in sustaining the lower court, held that if the physicians and surgeons being sued had diagnosed the ailment and treated Rose during the same or a part of the same period of time, even though they were acting independently of each other, each was liable for the acts of all.

To illustrate, if Dr. O'Bannon of Fleming County saw a patient, examined him and prescribed for him, and later referred him to Dr. Vance of Lexington and he treated the case, either operative or medically, although they never saw the patient together, if the patient later sued for malpractice, Dr. Vance was just as liable as Dr. O'Bannon and vice versa.

Under the belief that the court did not really mean to hold such a thing to be the law, but that this particular paragraph inadvertently crept into the opinion, our attorney, Mr. Curtis, filed a petition for a rehearing in which he asked the court to eliminate this particular paragraph, or at least to so modify it as to conform to the law. The court sustained his motion for a re-hearing and struck from the opinion said objectionable paragraph.

This was a bitterly fought case on the part of Judge Rose. He filed several amended petitions, in one of which he sued the Kentucky State Medical Association as a copartnership and asked for a judgment against every physician named and unnamed in Kentucky who was a member of the Association. While there was no merit in any of his contentions, we had to fight him and did fight him, winning in every instance, and this litigation is now at an end.

While it was stated by our attorneys that there was absolutely no merit in the case, yet the suit wasn't a joke by any means. Dr. South, whose husband was in the case, can tell you how hard fought it was and how we had to employ some of the best legal talent in the state.

The prompt reporting of all cases threatened or filed and the complete cooperation of the doctors is absolutely essential to success. Ignorance, carelessness, lack of skill, can all be successfully combated, but negligence and professional jealousy or hatred are two obstacles that are almost insurmountable.

Our Committee would be remiss in closing this report if we did not pay tribute to our splendid attorney, Mr. L. R. Curtis, and to the whole-hearted and effective support of the doctors and surgeons in Louisville and throughout the state.

J. W. Scott: I move that the House express its thanks to the Committee for the satisfactory way it has been carrying on its activities, and to Mr. Curtis, also.

The motion was seconded and carried.

President Barbour: Dr. Simpson will give the report of the Delegates to the American Medical Association.

Virgil Simpson, Louisville: The scope and degree of activity of the House of Delegates of the American Medical Association has broadened and speeded up until little more than a skeleton of the actual work of the Association can be packed into a period that can properly be spared by this House of Delegates in its work in behalf of the people and profession of this state. Nevertheless, it is felt that some account of our stewardship should be rendered. It is also felt that a heartier cooperation of the members of the profession is assured when it knows how and why a given decision was reached or action determined. You must realize that individually the members of the medical profession have small influence, while collectively they are veritably a legion of strength. You should also recognize that the House of Delegates of the A. M. A. must function for the entire profession, hence its vision must be one of nationalism. The state and county constituents have the local viewpoint.

MEMBERSHIP

A membership of 97,111 as of April 1, 1933, was reported by the Secretary. Eight thousand, eight hundred and seventy-seven new members were added during the year, and 9,972 were lost. Of these latter, 1,502 died, the bulk of the remainder failing to maintain membership through non-payment of dues.

There were 62,495 names on the Fellowship roster; 3,317 names were added during the year, and 5,259 were removed. Of the latter, 796 were by deaths.

There are 159,050 physicians in the United States, hence only 61 per cent are members of the A. M. A. There are 2,867 physicians in Kentucky; of these 1,733 were members of the State Association as of April 1, 1933, and only 671 of these are Fellows. This showing of Kentucky suffers by comparison with such states as Arizona, Connecticut, Delaware, Massachusetts, Michigan, Montana, Nevada, New Hampshire, New Jersey, North Dakota

and Utah, where the ratio is 1 to 2, while in Kentucky the ratio is 1 to 4.

The Secretary expressed the opinion that "apparently, practically all lapses in Fellowship * * * were occasioned by the unfavorable economic situation." There is little doubt of the accuracy of this opinion. The Board of Trustees has authorized retention on the roster of Fellows unable to make remittance provided they indicate their intention to do so "within a reasonable time." I repeat what I said last year, viz: A temporary reduction of dues should be made.

It may be of interest to indicate the status of members and Fellows. Members in good standing of the constituent associations (state and territorial) are members of the A. M. A. subject to provisions of By-Laws. They are not allowed to register or take part in the scientific work of the Association. In this connection, North Carolina State Association sent a member as Delegate to the A. M. A. at the Milwaukee Session who was not a Fellow. The Committee on Credentials recommended that he be not seated, and the recommendation was sustained by the House of Delegates. Fellows are members who have paid their dues and subscribed for the JOURNAL of the A. M. A. subject to approval by the Judicial Council.

There are four kinds of Fellows: (1) just a plain Fellow. (2) an Affiliate Fellow, meaning one who has been just a plain Fellow for fifteen continuous years, not less than sixty-five years of age, an honorary member of his component and constituent associations may on request of his constituent association be made an Affiliate by the House of Delegates; (3) members of chartered national medical societies adjacent to the United States. American physicians located in foreign countries, if engaged in missionary or philanthropic work, dentists who are members of dental societies, pharmacists who are members of the American Pharmaceutical Association, and certain teachers of allied sciences, may be elected as Associate Fellows; (4) physicians of foreign countries may be elected as Honorary Fellows.

### FINANCIAL

The Board of Trustees, which administers the funds of the A. M. A., reported to the House of Delegates that "the year 1932 was in some respects an exceedingly trying period," but was able to declare a net income of $93,842.75. As a business achievement this merits commendation and when further viewed in the light of the statement that "an appraisal of the Association's investments on December 15, 1932, showed that the total depreciation and amounted to less than 6 per cent," one marvels at the business acumen of men who are just doctors. That is incomparably better than the record confessed by the House of Morgan at the recent Congressional inquiry. Article 2 of the Constitution of the A. M. A. states, "The objects of the Association are to promote the science and art of medicine and the betterment of public health." Can you visualize what we would have done if it had incorporated for profit?

The Treasurer's report for the year ending December 31, 1932, showed the following data:

| | |
|---|---|
| Invested and uninvested reserve | $1,895,831.38 |
| Total property and equipment | 953,284.43 |
| Cash, accounts receivable, etc. | 551,590.45 |
| Total Assets | 3,400,706.26 |
| Total Income (1932) | 1,634,848.31 |
| Total Expenses (1932) | 1,541,005.56 |
| Net Income (1932) | 93,842.75 |
| Salary budget | 438,838.59 |

These figures give a rough sketch of the immensity of the growth of organized medicine. That it should be required to pay penalties for such a vigorous activity is not unexpected and you will not be surprised to learn that the legal profession attempts reprisals. It cost the Association $53,963.98 for legal services and investigation last year. Two of the largest suits were decided in favor of the A. M. A. during the year. Most of you are familiar with the suits of Baker of Iowa, Brinkley of Kansas, and Clark of Illinois.

One does not know whether it were better to affect loyalty to the organization and praise the management of the Association for its business acumen in establishing a net profit during a year of sinister disaster in the commercial world, or choose to be loyal to the members of the profession and one's own convictions and assert that some of the activities of the Association could suffer abbreviation temporarily or that no serious consequences would eventuate were some inroad made on the reserve. One might be justified in asserting that a part of a reserve fund now totaling $1,895,831.38 might well be used for bridging emergency streams and that the present depression period is no mean emergency. One might be stoned for turning prophet, hence it is best to devoutly wish that luck may always attend us in our legal adventures and that a Brinkley or a Baker or a Clark may not hypothecate any part of that reserve which, after all, comes from the doctor's pocket.

### THE JOURNAL

There was no decrease in the number of pages of reading matter during 1932. It maintains a complete service in the field of

foreign medicine. It issued special numbers during the year, such as the Hospital Number, the Medical Schools and Licensing Board Number, Clinical and Radiological Numbers, etc. The number of copies issued in 1932 totaled the amazing figure of 4,788,903. It may not be generally known that the policies of the organization are determined by the Board of Trustees subject to the final approval of the House of Delegates, and are translated through the editorial columns of the JOURNAL. In this way the profession is speedily informed of the policy of the A. M. A. and the constituent associations may thus reach their membership for discussion while history is in the making.

The average number of subscribers to the JOURNAL during the year was 90,360. Nine hundred and fifty-four doctors in Kentucky received the JOURNAL in 1932. This is thirty-four per cent of the total practicing in the state. There are only five states that show a lower percentage. The operating expenses of the JOURNAL were $929.514.29. and its gross earnings $1.534,609.98, leaving its net earnings $605,095.69.

### SPECIAL JOURNALS

Eight specialties are now represented by periodicals issued by the A. M. A. The journals are the Archives of Internal Medicine, Pathology, Surgery, Ophthalmology, Otolaryngology, Dermatology and Syphilology, Neurology and Psychiatry and the American Journal of Diseases of Children. All but two of these were published at a loss to the Association. It is felt that these journals are all leaders in their respective fields and their service justifies the cost.

### HYGEIA

This is the health magazine of the A. M. A and while it has become the best periodical in its field, it yielded a profit to the Association of $18,768.62. It was started ten years ago and now finds its way into schools, laboratories and homes and is creating a respect for and confidence in scientific medicine. It should be on every doctor's reception room table.

### AMERICAN MEDICAL DIRECTORY

The publication of the thirteenth edition of the American Medical Directory was postponed. Instead, a supplement to the Twelfth Edition was issued in November, 1932. This listed 8,000 new names. It was billed to members who subscribed at $5.00; the Twelfth Edition was billed at $15.00; it would seem that supplements are expensive, especially when it is recalled that the Association felt that the compilation of biographic data had to be continued anyway for its every-day work.

### PACKAGE LIBRARY SERVICE

Your attention was invited last year to the Package Library Service. This service is of especial value to physicians without access to an organization library. Two thousand five hundred and eight packages were furnished to physicians in 1932. This service is supplemented by a periodical-lending service, which during the same year loaned 7,385 journals. The periodicals available comprise those listed and abstracted weekly in the JOURNAL, together with 1,300 received nd indexed by the Index Medicus. It is suggested that the establishing of a similar state service for this Association would be helpful to and appreciated by the profession of Kentucky.

### THE WORK OF THE COUNCIL ON MEDICAL EDUCATION AND HOSPITALS

In 1931 the House of Delegates instructed the Council on Medical Education and Hospitals to study the question of specialism and make recommendations as to the proper qualifications of physicians engaging in special practice. In 1932 it made its report with reference to the fields of radiology and pathology, which were adopted. At the Sessions of 1933 the Council reported that it was prepared to extend its service into other special fields of medicine, and suggested that the A. M. A. should make available lists of physicians who do conform to uniform and approved standards in the various special fields of medicine.

The Reference Committee on Medical Education of the House recommended that this study be extended to the other special fields in medicine and that an initial and uniform standard should be adopted rather than those of state boards and state societies. To attain this end it was further recommended that the Council on Medical Education and Hospitals be authorized to approve all such special examining boards as conformed to the standards set up by the Council and that the machinery of the A. M. A. be used to further this work of the Council and such examining boards as it accredited. Among the special examining boards listed in this recommendation were the American Boards of Ophthalmic Examinations, Otolaryngology, Obstetrics and Gynecology, and Dermatology and Syphilology. It is coming to be generally recognized that specialism in the United States is running amuck. The shorter hours, the greater prestige, the larger remuneration, have encouraged its rapid growth during the last decade particularly. The situation confronts the profession of an oversupply of specialists, too many of whom have had inadequate preparation.

The House of Delegates intends to place no

restrictions on specialism, nor any restriction on the number of specialists; it cares only that the annual crop of self-constituted specialists with no, or at best, inadequate training be blighted.

It may be of interest here to call attention to the conclusion of the Council on Medical Education and Hospitals that the medical profession is over-crowded and it is suggested that the A. M. A. enlist the cooperation of colleges in an endeavor to place a substantial restriction of enrollment in medical schools. The Commission on Medical Education in its final report recently issued estimates that there is a surplus of 25,000 physicians in this country and that during the last ten years the number of medical graduates exceeded the number of deaths plus the present rate of population increase. Notwithstanding this condition, in 1932, 12,280 students made application for admission to our medical schools, and 6,335 of these were actually matriculated. The Reference Committee on Medical Education of the House of Delegates recommended the approval of the Council's suggestion and the House of Delegates unanimously endorsed it.

Your attention is also invited to the preliminary report of the Council on Medical Education and Hospitals covering the hospitalization of the mentally ill. This report covers an extensive study of some 631 hospitals and institutions interested in the care and treatment of the mentally sick. This report has been published in the JOURNAL and has also been published under separate cover. This report is available to our members. The House of Delegates approved the preliminary report and authorized its continuance.

### PREVENTION OF BLINDNESS BY EXAMINATION OF PREGNANT WOMEN

A resolution from the Section of Ophthalmology was offered in the House of Delegates, stressing the incidence of diseases of the eyes of children due to congenital syphilis and authorizing the creation of a committee to cooperate with the National Society for the Prevention of Blindness, the American Social Hygiene Association, the American Dermatological Association, obstetrical and ophthalmological societies and public health organizations in an educational campaign for serological study of all pregnant women. This resolution was adopted. The thought occurs that what is called in the resolution a "deplorable condition" is the outgrowth of observations in prenatal clinics where the incidence of syphilis is admittedly higher than in private practice groups. The incidence of positive serological tests in such prenatal clinics ranges probably from three to five per cent.

### THE WORK OF THE COUNCIL ON PHYSICAL THERAPY

This Council was authorized by the House of Delegates in 1925 and began to function late in the same year. When one recalls the rapid growth of therapeutics during the last ten years, the misleading and often deceptive advertising in connection with the manufacture and sale of these devices, the high pressure salesmanship methods employed, a strange credulity in the unreasonable efficacy of these appliances, shared unfortunately alike by the profession and the laity, one can appreciate the real need for the establishment of such a council. Very few doctors were sufficiently informed as to the physics of electric therapeutics to differentiate in the application of the various modalities. There was no dependable source of information to which he could go for guidance. The Council has undertaken to supply this need on the basis of three aims and purposes: (1) To protect the profession and the public from misleading and deceptive advertising; (2) to disseminate reliable information concerning the choice and application of methods of physical therapy; (3) to act in an advisory capacity to the profession and the public.

The activities of the Council were published in the JOURNAL when completed. Its acceptance and non-acceptance of devices has been made known to the profession. Its influence over the character of advertising used by manufacturers has been a very salutary one, and as a result of the seven years' work of the Council, the place of physical therapy methods is becoming more scientifically fixed. The handbook of Physical Therapy, published by the Council during the past year, is warmly recommended.

### MEDICAL ECONOMICS

The House of Delegates unanimously adopted the following resolution:

"RESOLVED, That the House of Delegates of the A. M. A. endorse the Minority Report of the Committee on the Costs of Medical Care as expressive in principle of the collective opinion of the medical profession."

The A. M. A. is now therefore, definitely committed to support the minority report program.

A vast amount of work has been done by the Bureau of Medical Economics headed by Dr. R. G. Leland. Its studies of contract practice, workmen's compensation, collection methods and agencies, outline for medical economics for use in medical schools, group practice, group hospitalization and health and accident insurance practice have been published in full in the A. M. A. JOURNAL.

I wish to recommend to this House of Delegates that a resolution be introduced asking

that the Medical School, University of Louisville, set aside a limited number of hours devoted to medical economics and medical ethics.

The House of Delegates of the A. M. A. approved the recommendation of its Reference Committee on Medical Economics that the action of county societies in dealing with questions of contract practice be based on the recommendations of the Judicial Council of the A. M. A. which become an amendment to the Principles of Medical Ethics, Chap. II, Art. VI, Sec. 2 (For Judicial Council's definition of Contract Practice see J. A. M. A., CI, page 47, July 1, 1933). The recommendations of the Reference Committee on Medical Economics that the action of county societies in dealing with contract practice problems be based on the recommendations of the Judicial Council was approved by the House of Delegates. The House also approved the recommendation that the report of the Bureau of Medical Economics on Medical Relations under Workmen's Compensation form the basis of state conferences on this subject.

### Medical Service to Veterans

Much time at the annual meeting of the House of Delegates at New Orleans was devoted to consideration of the problems growing out of the varied legislative enactments of the Federal Congress since the close of the Great War. The House had definitely taken the position: (1) that the Government owed a definite responsibility to the widows and orphans of men who had lost their lives in their country's service; (2) that it also was under obligation to care for those whose earning power had been crippled or lost by service-connected disability, including hospitalization when necessary; (3) it was equally as vigorously opposed to the extension of medical care including hospitalization, at the Government's expense to non-service-connected disabilities.

The Federal Appropriations budget for the fiscal year ending June 30, 1933, provided for an expenditure of four billion dollars. Of this almost unthinkable sum, nearly one-fourth, or a total of $928,000,000 dollars, was allocated to the Veterans Administration Bureau. Approximately fifty per cent, a sum of $452,000,000 goes for payments and benefits for deaths and disabilities not service-connected. Approximately 4,500,000 men and women in the United States are classed as veterans; of these, 30,000 are women; the average is about forty, and they occupy every round of our economic ladder, are engaged in every form of activity in civilian life. The Government had in operation on January 1, 1933, 304 hospitals. These embrace the Army, Navy, Public Health Service and Veterans' Bureau, and represent a bed capacity of 74,151 with a seventy-eight per cent occupancy. Sixty-seven of these hospitals, with 41,000 beds, were devoted to the care of veterans. The total number of patients admitted to all government hospitals in 1932 was 326,628, with a total number of patient bed-days of 21,164,160 and an average of sixty-four days per patient. The average bed days per patient in non-government-owned hospitals for the same period was fourteen. Notwithstanding that there was an average of 16,167 unoccupied beds in federal hospitals in 1932, the Medical Council of the Veterans' Bureau estimated that 129,859 beds would be required to meet the needs of veterans. The cost of such a scheme of hospitalization would be enormous and can only be estimated. But if the construction cost per bed be estimated at $3,500 and the maintenance cost $4.42 per bed per day, the trifling total of $454,000,000 for construction and $209,000,000 annually for hospital care would be reached.

These figures do not include the cost of admission ($30 per patient), professional staff: ($151 per bed per year), which would add on another $60,000,000. Such a scheme provides for state medicine for more than 4,000,000 of our citizens and furnishes the background for the interest evidenced by the House of Delegates.

An active year was planned through the Committee on Legislative Activities and considerable work had been done, when suddenly in the course of political vicissitudes the newly inaugurated President included the Veterans' Bureau in the scheme of Federal economy. This act left little for the House of Delegates at Milwaukee to consider except to look to the future and warn the profession that with the return of prosperity, just as surely will an active, importuning American Legion and a Federal Congress, always lenient with veterans who can yet vote and likewise with the taxpayers' money, restore and multiply the medical care temporarily withheld by the President.

### Section on Stomatology

A petition was read from the American Society of Stomatologists asking that a Section on Stomatology be formed by the House of Delegates, or a sub-section in some already existing section. This was referred to the Council on Scientific Assembly, which recommended that such a section or sub-section should not be established. The House approved the recommendation of the Council.

It may be recalled that such a section was at one time a part of the scientific set-up and was discontinued chiefly because of poor attendance.

### Disciplinary Action

The name of only one member of the Association was removed from the roster of membership, and this was done because of unethical conduct. This action was taken by the House on recommendation of the Judicial Council.

### Bureau of Information at Washington

The Surgeon General of the Navy introduced a resolution providing for the establishment of a permanent office with personnel in the City of Washington for the purpose of representing the A. M. A. before Committees of Congress, Departments, Bureaus, Societies, etc., and to be under the direction of the Bureau of Legal Medicine and Legislation. This resolution was referred to the Board of Trustees, which recommended disapproval of such step and the House supported the recommendation.

The A. M. A. now maintains a permanent representative in Washington in the person of Dr. W. C. Woodward, who is the head of the Bureau of Legal Medicine and Legislation. Dr. Woodward has already demonstrated his fitness and usefulness in that work. This is a form of lobbying, it is true, but, as the work of Congress is now conducted, it appears necessary that organized medicine be represented in Washington. Granting this to be evident, it would appear the part of wisdom to maintain a representative there who is seasoned rather than to rely upon drafting some willing but inexperienced soul on occasion. There would appear to be but little difference in the ultimate cost, but a vast difference in the service.

### Misleading Radio Broadcasting

A resolution directing the Board of Trustees to endeavor to have terminated misleading radio broadcastings relating to medicinal remedies was referred to the Committee on Hygiene and Public Health, which recommended its adoption and the House supported the recommendations.

At the present time there seems to be no restriction on advertising statements and claims, hence the public may easily be misled by unsupportable claims for the cure of diseases.

### Ex Officio Members of the House of Delegates

An amendment to the Constitution and By-Laws was proposed at the 1932 Session which would have made the presidents of constituent state associations ex-officio members of the House of Delegates. This was referred to the Committee on Amendments and By-Laws, which recommended its defeat. The House obliged the Committee by tabling the proposal. The merit of the proposal seemed to be an added link between state associations and the parent organization on the assumption that a president of a state association naturally wielded a larger influence than its delegates. The weakness of the plan lies in an increase in membership of the House already large for a deliberative body, that it would add to the discussion of subjects by these ex-officio members, who would have no right to vote.

### Birth Control

The perennial resolution providing for a committee to study birth control was duly presented and referred to the Committee on Hygiene and Public Health.

It was reported back to the House with recommendation that such action was considered inadvisable. Your delegates voted unanimously with the preponderant majority of the House in support of the Committee's recommendation.

It may properly be due this House, and the profession of the state, and especially those who favor the efforts to enlist the medical profession in the propaganda now in full swing, to state some of the reasons that influenced your delegates in their vote. We believe that because of religious beliefs and teachings this must remain a controversial matter. There are a great number of Catholics in this country, who, in the main, accept the dictum of the head of Catholicism that prevention of conception is wrong. No action of the medical profession in the United States would change that morality ukase. One need but remind this body of the attitude of Catholic hospitals toward premature emptying of a uterus when it is the judgment of the physician that the mother's life is in jeopardy. It would surely be an unwarranted optimism to indulge the hope that the Church would sanction a crusade that has as only a part of its impelling motive a thought for fewer and better babies. We feel that the dissemination of information concerning contraceptives would tend to encourage illicit relations, particularly among the unmarried. We doubt if such dissemination would really be of service to the class of families where some such limitation might be wise. The poor cannot buy means for "safe indulgence" when they have insufficient funds to buy the necessities of life. The ignorant could acquire indifferent skill in the use of such measure, if at all. The propagandists argue for the poor and the unlettered. If they are sincere there would seem to be no real need for contraception among the well-to-do and the intelligent. Biologically the human race should draw from such sources, and yet as a matter of fact the birth rate of such families is falling steadily. Bad people are producing more children than good people. This

means race deterioration in the large. Advice by doctors in the use of contraceptives will not save the human race. If physicians are really interested in the human race as a biological problem, let them study and understand the fundamentals of real eugenical problems and lend their influence in building up a healthy, sane attitude on the part of our young men and women, teach them that blood tells, that ancestry bulks large in the fitness of a human to do his job; teach them to cooperate intelligently with the forces that have made them, and they, in turn, will become healthier, wiser, happier.

That is eugenics at its best, a dynamic attitude toward the humanities, an animating viewpoint rather than some definite program. To merely teach a race how it may consort sexually without conception is sordid compared with viewing the problem of human improvement from a selective viewpoint. Man's heritage will not be enriched by death-selection, but rather by birth selection. Whether the race goes up or down, whether better or worse, depends on a better training in mating, not on easy marriage assured of a ninety per cent immunity from the responsibilities of parenthood and the remaining ten per cent maturation of unfit or unwanted progeny. Remember what old Sir Thomas Browne said: "Give thanks to Heaven, not that thou wert born in Athens, but that thou wert born of noble parents, and that honor, virtue and integrity lay in the same egg and came into the world with thee."

Finally, we believe that the medical profession has always advised against the ill and unfit having children when and where the advice was necessary and wanted. It can continue to do so without encouraging the formation of societies, the reading of esoteric papers and books, the promiscuous discussion of sex, the organization of so-called clinics.

### Medical Alcohol

When representatives of the A. M. A. appeared before the Committee on the Judiciary of both House and Senate early in 1932 to support legislation proposed by organized medicine intended to modify provisions of the National Prohibition Act relating to medicinal liquor, the mission was an important one. The Federal Congress had declared that alcohol possessed medicinal properties and laymen decreed under the provisions of the Volstead Act that a physician could order only a fixed quantity of alcohol and only at fixed intervals. No such arbitrary and unreasonable restriction had ever been placed on the professional activities of doctors. The bill sponsored by the Association was finally passed and signed by the President in March, 1933. In the light of rapidly moving events since that time, the point gained seems to be rapidly losing its significance. It appears that soon only state restrictions will remain. The new law provides that "no more liquor shall be prescribed to any person than is necessary to supply his medicinal needs." The expensive and troublesome official prescription blanks are to be discontinued by January 1, 1934, and the physicians' blanks validated by special stamps will be used until the 18th Amendment is removed from the statute books.

### Place of Meeting

Cleveland, Ohio, was chosen as the place of meeting for 1934. Atlantic City extended an invitation for the meeting.

### Officers

The House elected the following officers:

President-Elect, Walter Bierring, Des Moines

Vice-President, John H. Musser, New Orleans

Secretary and General Manager, Olin West, Chicago

Treasurer, Herman L. Kretschmer, Chicago (Nominated by Board of Trustees)

Speaker, House of Delegates, Fred C. Warnshuis, Grand Rapids, (Re-elected)

Vice-Speaker, N. B. Van Etten, New York

Board of Trustees, (2 members) Austin A. Hayden, Illinois; C. B. Wright, Minnesota.

Respectfully submitted,

Virgil E. Simpson.

Secretary McCormack: I move that the report be accepted and approved, and that the Association request the University of Louisville to set aside a limited number of hours devoted to medical economics and medical ethics, and that we especially approve the action of our delegates in regard to the matter of birth control.

The motion was seconded and carried.

Virgil Simpson, Louisville: I have another report.

Since I happen to be the representative of the State Medical Association to the Convention for the Revision of the U. S. Pharmacopeia during the present decade, I would like to say at the outset that our method of selection of delegates to the Convention is not the most happy one. The House of Delegates here should select a man, which it has not done.

The personnel of the Convention, which meets every ten years, is composed of three members from each constituted state medical association, state pharmaceutical association, from various branches of the Public Health Service, the Army Medical Department, the Navy Medical Department, and certain other organizations that are interested in the manufacture and sale of drugs.

That Convention met in Washington in May, 1931, and organized for the purpose of revision of the Pharmacopeia. Some seventy men were selected to do the actual work of revision by the Convention. They composed a Committee on Revision. It was their job to carry on during the next three or four years following the decennial convention meeting, with the actual work of revision. We have been at that job now since the Convention adjourned, and there are a few things that may be of some interest to you.

It may interest you to know that we met last year in August in Pennsylvania for the purpose thrashing out some things that we couldn't settle by correspondence, and one of them was the question of whether or not whiskey and brandy should be admitted to the United States Pharmacopeia. We had a nice little fight about the matter, and on counting noses we realized that we were licked, and the matter was, in parliamentary fashion, postponed and the influence of the United States Government was gotten behind the proponents of the admission of whiskey and brandy, and the result was that when we met this year again for the purpose of completing some work that could not be settled by correspondence, whiskey and brandy were admitted.

This Convention for the Revision of the Pharmacopeia is not an official body as far as the national government is concerned. The only connection which the United States Government has with the U. S. Pharmacopeia is that by the National Foods and Drugs Act it had to have some sort of standard whereby it could enforce its provisions, and Congress elected to adopt the U. S. Pharmacopeia as that standard, as that yard-stick. The U. S. Pharmacopeia began and has continued as a purely voluntary organization of doctors and druggists; it finances itself without aid, and the resources are obtained from the sale of the book as issued.

The question of supplements to the Pharmacopeia is a problem. It is issued only every ten years. It is a long time between drinks, between issues, and as a consequence the book tends to grow old and to get out of date. It is provided now that supplements be issued from time to time during the ten-year period between the times of issuance of the completed book, so that it may be kept up to date.

It may be interesting also to know that some activity is being manifested by the Board of Trustees of the Pharmacopeia in the matter of publicity, and at the American Medical Association convention they maintained a booth showing some of the work that was being done by the Pharmacopeia, some of the advantages, and calling attention of physicians to the advisability of drugs that are official rather than using so many drugs, as some of you do, that merely have the sanction of their manufacturers.

It may still further be of interest to you to know that the Board is also maintaining at the Fair in Chicago a booth for similar purposes.

The deletions, that is the elimination of agents that were admitted to the Pharmacopeia No. 10 and which will be eliminated from Pharmacopeia No. 11 which will be issued in the next year and a half, compose now some seventy-five or eighty drugs that we believe are unnecessary. We have a good deal of remonstrance in the matter of these deletions. These remonstrances have not come from the medical profession; they have come from the druggists. The druggists have been exceedingly loath to have drugs removed from a place in the Pharmacopeia. Just why their attitude toward the matter is as it is, is a matter that I tried to learn. I asked the question very definitely before the Convention; I asked the druggists to tell me what the pecuniary benefit was that would accrue to the druggist by his maintaining a large number of drugs on his shelves which he was obliged to maintain at a loss as far as investment was concerned when the turnover was so small, yet they objected to eliminating that large number of drugs.

The admission of new drugs to the Pharmacopeia has given us perhaps the greatest concern. It is an easy matter for me, at least, to decide that there are over twenty official preparations of iron and we don't need more than three or four. There is no necessity for having so many preparations of iron, yet we have not been successful in eliminating but four or five.

When it comes to a question, for example, of digitalis, it is a perfectly simple matter to decide that digitalis should be in the Pharmacopeia, but is not an easy matter to decide in what form it should be in the Pharmacopeia.

We have decided, I think as an advance step this year, that there should be omitted from the Pharmacopeia powdered digitalis leaf.

Another thing that came up was the question of the selection of a preparation of digitalis for intravenous use. It may be surprising to you to know that it is a matter of considerable difficulty, and we have had engaged in the work on that pharmacological laboratories such as are maintained at Ann Arbor, for example, Johns Hopkins, and others, that have been at work on this prob-

lem for over a year, and they reported at our last meeting they were encountering considerable difficulty.

Some of you may say: "Why an intravenous preparation?" The committee and the sub-committee that have to do with scope raised that question, and on that sub-committee are such clinicians as Dr. Henry Christian, for example, of Boston, Dr. Bastedo of New York, and others of similar standing in the profession. The question was seriously discussed as to whether we need a preparation of digitalis for intravenous use.

Upon the question of standardization of vitamines a tremendous amount of work and money is being spent. They are working in cooperation with foreign committees. Some of the best men in the country, those who have made vitamine progress what it is today, are now engaged, under the direction of the U. S. Pharmacopeia Committee, in trying to standardize vitamines for admission to the Pharmacopeia.

If there are those of you who have kept up with the literature and feel that there have been any deletions that particularly hurt your therapeutic sense, we will be glad to hear from you.

We have acted on every single request that has been made for restoration of deleted drugs. We have acted on practically every request that has been made for the admission of new drugs, and it is a big problem to know just what drugs should be admitted to the Pharmacopeia, what drugs have established themselves as being worth while from a therapeutic standpoint and should be accorded a place in the Pharmacopeia.

One of the difficulties that we have, for example, you can readily appreciate in the barbituric acid group, is that most of the preparations that you men are using today are covered by patents. We can't admit them to the U. S. Pharmacopeia very well, with very good grace. We can't admit a patented article, because if it is made by pharmaceutical house A, then pharmaceutical house B gets sore and they say there is some insidious distinction. So we have adopted the plan mainly that articles that are covered by patents should not be accorded a place in the Pharmacopeia.

Whether or not we should admit the scarlet fever toxin, whether we should admit scarlet fever antitoxin, and questions of that kind are problems that demand the very best of thought and demand some knowledge of the attitude of the entire profession over the whole country before we definitely decide whether these or others should or should not be admitted. The difficulty about the scarlet fever problem is that there is a scarlet fever commission and it has been licensed by the Government to act and cooperate, and if we approve the preparation of scarlet fever antitoxin and admit it to the Pharmacopeia, the question then comes up, have we done other investigators in the field an injustice? Is it sufficiently established and not subject to change in the next two or three or four years, as was suggested by Dr. McCoy, who is the head of the Public Health Institute, making it a serious problem as to whether such a thing should be admitted to the Pharmacopeia or not.

Those are some of the problems that your delegate has had the pleasure of participating in as the representative of the Kentucky State Medical Association.

PRESIDENT BARBOUR: If there is no discussion of the report, it will be approved as read.

SECRETARY MCCORMACK: From the American Medical Association I have this communication:

September 6, 1933.

At a meeting of our House of Delegates, June 13, 1933, the reference committee on legislation and public relations reported in part as follows:

Your committee concurs in the recommendation of the Board of Trustees contained in the report of the Bureau of Legal Medicine and Legislation that proper narcotic legislation by each of the several states be urged. Your committee recommends that the Association approve the draft of the proposed uniform state act concerning the control of narcotic drugs, prepared by the National Conference of Commissioners on Uniform State Laws and approved by the American Bar Association. This draft had its origin in the work of a committee of the American Medical Association, and in its preparation the Bureau of Legal Medicine and Legislation had an active part.

'Your committee concurs in the recommendation that the House of Delegates approve the draft of a proposed uniform medical lien law prepared by the Bureau of Legal Medicine and Legislation and submitted to the several state associations as a guide in the preparation of similar legislation. Jour. A. M. A., 101:18 (July 1) 1933.

The report of the committee was adopted.

I am sending to you under separate cover a few copies of the narcotic legislation approved by our House of Delegates, 'An Act Defining and Relating to Narcotic Drugs and to Make Uniform the Law with Reference Thereto.' I sincerely hope that the Kentucky State Medical Association will approve this legislation and take steps looking toward its enactment in the State of Kentucky.

Although it was not until October, 1932, that the National Conference of Commissioners on Uniform State Laws and the American Bar Association approved the final draft of the proposed uniform state narcotic act, the act has already been passed, substantially as recommended, by Florida, Indiana, Nevada, New Jersey, and New York. It has the active support of the Bureau of Narcotics, United States Treasury Department. Two features of the act possibly call for special comment.

Court's Suspension and Revocation of Licenses and of Registration. One of the provisions of this act that should appeal most strongly to the medical profession, it seems to me, is that permitting the court, on the conviction of any licensed or registered person of having violated the act, to suspend or revoke his license, and authorizing the licensing or registering authority to reinstate that license or registration, if it deems it right to do so, on a proper showing by the convicted licentiate or registrant. Section 15 of the act provides:

'On the conviction of any person of the violation of any provision of this act, a copy of the judgment and sentence, and of the opinion of the court or magistrate, if any opinion be filed, shall be sent by the clerk of the court, or by the magistrate, to the board or officer, if any, by whom the convicted defendant has been licensed or registered to practice his profession or to carry on his business. On the conviction of any such person, the court may, in its discretion, suspend or revoke the license or registration of the convicted defendant to practice his profession or to carry on his business. On the application of any person whose license or registration has been suspended or revoked, and upon proper showing and for good cause, said board or officer may reinstate such license or registration.'

At the moment of conviction, certainly no one is in so good a position as is the court to determine whether the defendant's license or registration should or should not be suspended or revoked. If the court can forthwith suspend or revoke his license, much valuable time may be saved, and the licensing or registered authority may be relieved of a most disagreeable and sometimes expensive procedure. The possibility of any court abusing its authority with respect to this matter is, it seems to me, negligible.

In any event, a licentiate or registrant whose license has been suspended or revoked by the court may, either forthwith or after a period of probation and reform, appeal to the licensing or registering authority for the reinstatement of his license or registration. The licensing or registering authority is thus called on to exercise a function analogous to that of a parole board or even of a court of appellate jurisdiction.

No Quantitative Limit on the Amount of Narcotic Drugs a Physician May Prescribe, Administer, or Dispense. There has occasionally been misunderstanding with reference to the provisions of Section 8, relating to exempt narcotic preparations.

Subsection (3), paragraph (a), provides that no person shall prescribe, administer, or dispense any exempt narcotic preparation, under the exemptions of this section, containing any of the narcotic drugs covered by the act, in quantities in excess of certain stated amounts. That does not prevent a physician from prescribing, administering, or dispensing any narcotic drug, whether an exempt preparation or otherwise, in any amount whatever that may be required by good professional practice, so long as he does not do so under 'the exemptions of this section;' that is, so long as he complies with the general requirements of the act.

That is made clear by the last paragraph of the section, which reads:

Nothing in this section shall be construed to limit the kind and quantity of any narcotic drug that may be prescribed, administered, dispensed, or sold, to any person or for the use of any person or animal, when it is prescribed, administered, dispensed, or sold, in compliance with the general provisions of this act.

The draft of a proposed uniform medical lien law was prepared to meet the demands of our state medical associations that feel that there is a need in their respective jurisdictions for legislation of this character. Whether it is or is not needed in any state is obviously a matter that can be best settled by the state medical association. I am sending you under separate cover a few copies of the draft of the proposed law.

Yours truly,

William C. Woodward, Director.

I have a telegram from Mr. Anslinger, the Commissioner of Narcotics of the Federal Treasury in Washington, stating that one of the attorneys for the Narcotic Division will be in Murray tomorrow prepared to discuss this question, and I believe it is a matter of sufficient importance that when we adjourn we adjourn subject to the call of the President, to meet at such time as will be convenient to hear the attorney representing the Narcotic Bureau from Washington.

I move that when we adjourn we adjourn subject to the call of the President to hear that report.

The motion was seconded.

JOHN W. SCOTT, Lexington: The question has been raised whether it wouldn't be well for that to be brought before the entire Association rather than the House of Delegates.

SECRETARY MCCORMACK: It would be all right. The House of Delegates, of course, is the one that would have to act, but the Delegates would all be present in the meeting of the Association and they could act subsequently. I am perfectly willing to modify the motion that this matter be brought before the general session at such time as the Commissioner is here.

The amended motion was seconded, put to a vote and carried.

SECRETARY MCCORMACK: The Bureau of Chemistry, under the direction of President Roosevelt, is engaged in a revision of the Food and Drugs Act to eliminate the false and fraudulent claims that are being made in advertising and over the radio and on packages of patented and proprietary medicines. I move that the subject of the revision of the Food and Drugs Act be referred to the Council with power to act representing the views of the Association on the matter when the bill is finally drawn.

The motion was seconded and carried.

Upon motion regularly made, seconded and carried, the meeting adjourned at eleven o'clock p. m.

## THURSDAY MORNING SESSION

SEPTEMBER 14, 1933

The third and last session of the House of Delegates convened at eight o'clock, the President, W. M. Martin, Harlan, presiding.

PRESIDENT MARTIN: The House will please come to order. The Secretary will call the roll.

The Secretary called the roll.

SECRETARY MCCORMACK: Fifty-nine members present.

PRESIDENT MARTIN: Next is the final report of the Committee on Credentials.

A. W. NICKELL, Louisville: Before you proceed to the regular order of business, I want to supplement the report of the Jefferson County Society with a report of the Committee on Medical Economics, Jefferson County Medical Society.

This Letter Questionnaire was read at a regular session of the Jefferson County Medical Society, July 20, 1933, by the secretary and on motion was referred to the Committee on Medical Economics.

The Committee on Medical Economics of the Jefferson County Medical Society submits the following statement, which summarizes its thought on the subjects covered by the questionnaire.

General Statement. The questionnaire merely lifts the recommendations of the Majority and Minority Groups, into which the Committee on the Costs of Medical Care mainly melted, and then asks one or more questions, some specific, some general, concerning each recommendation. A categorial answer, affirmative or negative, would serve the purpose of putting the Jefferson County Medical Society numerically on one or the other side of wholly debatable issues, and if the Council proposes to issue a formal statement of the position of the Kentucky State Medical Association as determined by a majority opinion, then such answers suffice for the Council's purpose. If, on the other hand, the Council desires opinions, as would seem to be implied by some of the questions, then a rather extended statement of reasons for conclusions reached would seem necessary.

Your Committee on Medical Economics would call attention to the study that is now being made by the Jefferson County Medical Society of the costs of medical care in Louisville and Jefferson County. This study was begun in February of this year, and while progressing satisfactorily, has not reached a stage where even tentative conclusions may be drawn, based on our local conditions. Our feeling is that until some further study of Kentucky conditions has been made the Council of the State Medical Association should confine its pronouncements, if any, to a conclusion based on principles only.

We offer that counsel to the delegates of the Jefferson County Medical Society and would urge that the idea be approved by the House of Delegates of the Kentucky State Medical Association. We further submit the thought that the recommendations as submitted by the questionnaire take no cognizance of other recommendations or statements of members of the Committee. The questionnaire thus precludes the possibility of approval or disapproval of such a conclusion as that, for example, reached by Edgar Sydenstricker, who said that he could not sign the final report of the Committee because it did not "deal adequately with the fundamental economic question which the Committee was formed primarily to study and consider." We find we have a large sympathy with the statement.

Your committee finds it necessary to draw a distinct line of cleavage between the principles enunciated by the Committee on the Costs of Medical Care and the recommendations both Majority and Minority Reports. It stated that substantial agreement of the whole committee was reached on the following principles:

1. The problem of providing satisfactory medical service to the people of the United

States at costs within their means is one of paramount importance.

2. The problem is a regional one, hence no blanket form of solution is applicable.

3. A goal is more important than an institution. Service is the only purpose of organization. None of the recommendations proposed is of value except to the extent they provide a satisfactory service at a cost that can be met.

4. The recommendations vary in importance and in applicability.

5. An evolutionary process is going on in medical practice.

6. There are valid reasons for believing the United States will emerge from the present depression and continue on economic advance with increased funds available for the purchase of commodities and services.

7. The professional standards of physicians, dentists, nurses, pharmacists and hospitals furnishing medical care must be carefully guarded in behalf of the people served and those who provide the service.

8. The maximum amount of local self-support and self-control and the greatest freedom consistent with social welfare should be preserved in so far as is compatible with effective service.

9. Too great centralization of authority carries elements of weakness.

10. That a well qualified general practitioner can care for a large proportion (80 per cent, we believe) of illness.

11. That lay groups organized for profit will eventually control medical practice is a real danger.

12. In any insurance plan there must be a clear-cut separation between insurance to meet the costs of medical care and insurance to cover wages lost due to illness.

13. That the full cost of medical care is not a proper responsibility of employers.

14. That the employment of individual physicians directly by owners of industry for furnishing medical care to employees places the physician in a position where it is difficult to maintain satisfactory standards of work.

15. That the public should be protected from inferior medical service and the professional personnel should be protected from exploitation.

16. That group practice may perpetuate the defects of individual practice and create new ones. That all personal relation to the patient may be lost; the doctors may lose their individual initiative and energy; that internal dissension born of jealousies may be effectively destructive.

17. That specialism be restricted to those specially qualified.

18. That nursing education is in need of a thorough and radical change.

19. That hospital illness is inexcusably expensive. It consumes fifty per cent of the total cost of medical care notwithstanding less than ten per cent of the sick are cared for in hospitals. Denominational competition has resulted in over-building of hospitals; empty beds but not reduction of overhead results. The occupied beds must carry the load. The size of the hospitals is another reason for the high cost of hospitalization; a 100-bed hospital must struggle, even at present prices, to keep out of the red. It would be easier for a 500-bed institution to break even. This criticism applies to cities with a number of small nursing homes called hospitals. In smaller communities the hospital must necessarily bear relation to possible needs, but if the county or state hospitalized its indigent sick there, the problem would be less acute.

On these principles there is no general disagreement in the profession and none in our Committee. The data compiled by the Committee on the Costs of Medical Care is rather voluminous, and in the main is fairly accurate. Much of it is the result of projected estimation based on a relatively small amount of factual data. For example, the figures given as representing the cost of medicines and sickroom supplies is so largely an estimate that we hesitate to accept the estimate as representing more than a none too conservative guess. If this statement be doubted by anyone, layman or physician, let him try to collect such data from the local drug stores. An approach to accuracy could be reached only through the co-operation of all manufacturing houses of legitimate drugs and of concerns manufacturing patent medicines. Such data has not been compiled. But the data the Committee did compile can be said to indicate trends and suggest estimates. It is not with these we would check and countercheck, it is when the Committee undertook to project the impressions it registered in the form of Recommendations which represent, as Van Etten said, an excursion into Utopian idealism on the one hand, while it savors of paternalism on the other.

Having set down the principles enunciated by the Committee with which we can agree, it remains to set up some others with which we do not agree:

1. We do not believe that group practice should be hot-housed. To the extent it is adequate it will develop under normal invitation. Medical groups are subject to professional failure to the same extent that any other business venture is. Financially the private practice of medicine is a more stable venture than participation in a group.

2. Since we oppose advertising and solicitation of patients by doctors, we cannot approve of clinics, as clinics, or through an agent, openly advertising and soliciting. This is but a beginning of the degradation of a profession into a competitive business.

3. We believe that voluntary insurance on a scale of any magnitude eventually leads to some sort of compulsory insurance. A compulsory insurance plan and a medical center would prove a set of twins the medical profession would blush to admit paternity to. Voluntary insurance could not protect the shiftless, improvident, poorly paid wage earner group; the better paid, provided group does not need it.

4. We would not object to an agreement entered into between an organized county society and a group in voluntary cooperative health insurance. This is infinitely an improvement over the old "Lodge" system. Both professional standards and financial interests could thus be maintained.

5. We believe that the practice of medicine by any corporation group is merely an act leading to the commercialization of medicine. It matters little whether the offenders are educational centers, hospitals or industrial concerns. The facilities of educational institutions should be limited to the utilization of charity beds. The offense is not mitigated by an arrangement whereby the institution or hospital gets the fee.

6. It is thought that government participation in the care of the sick should be confined to the indigent entirely regardless of the nature of the illness, except the military, naval and public health services. Veterans of wars who are suffering from service-connected illness or disability should, likewise, be cared for out of government funds. We would amplify the term government to mean federal, state, county and municipal units.

7. We agree that the first essential in an adequate medical service is a qualified physician. The medical profession is unique in the world of art, letters, science and industry; its members hoard no secrets from each other; a new procedure, an added bit of information, a tried experience in therapy, a new remedy, at once becomes the common knowledge of the entire profession of every civilized nation. It has constantly raised its standards of education and training; it has financed its current literature which is more voluminous than all other current scientific literature combined; it supports societies, associations, academies, etc., membership in which any doctor may secure and enjoy opportunities for advanced training; it provides for postgraduate facilities open to every doctor according to his needs and willingness to pay; it has put such thought, energy, study and devotion into its works that it has grown in facts, facilities and fulfilment of hopes and desires so rapidly that the rest of the world has looked on with amazement and admiration, and yet it must have recommended to it by representatives of the social sciences, special interests and the general public that it give more emphasis to this, more attention to that, more increase to the other, study harder, spend more time in postgraduate work, buy more books, subscribe for more magazines! In short, we should strive to become so cultured, so scientific, so theoretical that we would have little opportunity or time left for acquiring a familiarity with the art of medicine.

8. We cannot refrain from expressing some curiosity in the failure of the Committee to really concern itself about the cultists, faddists, healers, et al. The best it could do was the adumbration, "practice of *unqualified* cult practitioners should be eliminated." (The underscore is ours). It hastens on to say in the same paragraph that "the work of certain physicians and dentists, who even though they are regularly licensed are nevertheless not competent for many functions and should be closely controlled and improved through supervision and further education.

The Committee leaves one to conjecture just what is meant by an "unqualified" cult practitioner, but the proscription implies that there are qualified practitioners. It would seem further that the Committee, by implication, would consider that the training of such *qualified* cultist was comparable to that of "regularly licensed" physicians.

Again, the Committee, in a burst of civic concern, opines that the "125 million dollars spent for the services of osteopaths, chiropractors and allied groups and faith healers, is practically all wasted," but tempers its regret at this colossal waste by reflecting that, "possibly even greater sums are wasted through inferior services rendered by some licensed physicians." This attitude is all the more amazing when the Committee announces that of $665,000,000 spent for drugs, $360,000,000 of that total is spent for "patent" medicines; that $1,090,000,000 was paid licensed physicians annually, while the cultists collected one-ninth as much ($125,000,000). If one puts these two sums together, the "patent" medicine bill and the cultists' bill, the grand total of $485,000,000 is reached, which is nearly one-seventh of the whole cost of medical care. One dollar out of every seven actually wasted and not ranking even a Recommendation from the committee on the Costs of Medical Care.

9. We agree with Chairman Wilbur when he said, "What we are doing is to adopt the corporate idea to the practice of medicine." We do not believe that such adoption would solve the problem of supplying adequate medical service at a cost that can be met. We feel lukewarm over the idea that the proposed plan carries efficiency and economy. The corporate idea has suckled the Workmen's Compensation Acts, it stood godfather to the Veterans Relief Legislation, into which a billion dollars annually are poured. It has been built into the profligate, wasteful schemes of municipal and state federal governments. It would make a salesman instead of a scientist, a bootlicker instead of a brain worker, an office holding, salary-drawing parasite instead of an independent, alert, self-reliant friend and counsellor of the sick. We are not ready to put the profession on a chain-store basis, and with Dr. Cushing we wonder why the professional reformer and his financial backer are so greatly agitated over the feat of making the physician do something for the patient rather than devising some way of doing something for him themselves. This is communistic in the last analysis and what the communist wants after free food and free shelter and raiment is free medical care. It is a "medical dole," as aptly put by Dr. Robb, President-Elect of the Michigan State Medical Society, when he said, "A Rolls-Royce type of treatment is insisted on by patients who could afford a bicycle if they paid for it themselves."

10. Finally, we find in the final report of the Commission on Medical Education some food for thought when it states that there are more physicians in the United States than are needed to provide an adequate medical service for the country. The sixty-six Class A medical schools are turning out physicians at a rate that already has reached a ratio of one physician to approximately 750 persons. This is twice as high a ratio as obtains in most of the countries in Europe. Since the physician is the sole factor that is essential for adequate medical care, we believe that a definite limitation of the annual output of physicians until a ratio of 1 to 1000 persons is reached would have a salutary influence in a situation being made worse by the agitation of reformers and their financial backers alien to the best interests of both the sick and those serving them.

We find much of wisdom in the following paragraph taken from the discussion of "The Problem of Medical Care" by the Commission on Medical Education in its final report, 1932.

"Defects in the methods of medical practice in this country are widely recognized, but there are fundamental advantages in the American scheme which ought to be retained and extended. The solution of the problem is not the destruction of the present system and the substitution of a paternalistic plan ill adapted to the philosophy of American life, but rather the evolution of a pattern which will embrace the desirable features of present methods and the correction of their defects."

This, in substance, is what we would recommend to the Delegates for their approval.

The Committee on Medical Economics,
Jefferson County Medical Society,
VIRGIL E. SIMPSON, Chairman,
W. O. JOHNSON, Secretary,
GAYLORD C. HALL,
E. R. PALMER,
GUY AUD,
A. C. MCCARTY.

PRESIDENT MARTIN: Next is the election of officers. First to be elected is the President-Elect. Whom shall we have as President-Elect?

W. E. GARDNER, Louisville: There has been extended to me a privilege which I am sure it would be a pleasure for any member of this House of Delegates to assume, and that is to present to this Society for its next President, the name of a man who is well known to the active members of this Society throughout the State. If he is elected he will perhaps be the youngest president that this Society has ever had. While he is young in years, he is rich in experience, and by his energy, industry and professional accomplishment he has gained for himself a name and reputation equal to that of many of the more mature and outstanding members of this profession.

This gentleman is not only a man of pleasing personality, has a sense of justice and a consideration of the opinion of others, but he is a man among men.

Without further elaboration on his personal and professional accomplisments, it gives great pleasure at this time to present the name of Dr. C. C. Howard, of Glasgow, Kentucky, as President-Elect. (Applause)

H. H. HUNT, Mayfield: Mr. President, West Kentucky will consider it a privilege and honor to vote for Dr. Howard. As Delegate from Graves County, I want to second that nomination for President.

A. W. NICKELL, Louisville: Mr. Chairman, after accepting all the good things that have been enunciated by Dr. Gardner, I want to say that I think in the personage of Dr. Howard we have embodied and exemplified all the good and constructive things that the doctor ought to have. His contributions to Western Kentucky, to the state at large, for

that matter, are outstanding, and on behalf of the united delegates of the County of Jefferson, it gives me great personal pride to again second the nomination of Dr. C. C. Howard.

H. K. Buttermore, Liggett: I move that the nominations be closed and the Secretary be instructed to cast the vote of the House for President-Elect.

The motion was seconded and carried unanimously.

Secretary McCormack: Mr. President, I have the very distinguished honor of casting the ballot of this House for President-Elect.

President Martin: Dr. C. C. Howard is elected.

I will appoint Dr. York, Dr. Buttermore and Dr. Hunt and Dr. Nickell a committee to escort Dr. Howard into the room.

Nominations are in order for Vice-Presidents, one from Eastern Kentucky, one from Western Kentucky and one from Central Kentucky.

J. E. Edwards, Lancaster: The man I wish to place in nomination for Vice-President of the Kentucky Medical Association is a man well known to all of us. He has been one of the most faithful attendants of the Medical Association of probably any man in the Association. This man is not one who puts himself before the Society and makes a lot of noise and a lot of fuss about what he does; he is a quiet, modest gentleman.

This doctor was responsible for the first meeting of the Medical Association at the Eastern Kentucky Normal School at Richmond. In other words, he was instrumental in arranging for these meetings at the normal schools which have been so pleasant and so well attended and such beneficial meetings.

The doctor I wish to nominate is Dr. H. G. Sandlin of Richmond. (Applause.)

John W. Scott, Lexington: I wish to second the nomination. I wonder if it would be in line to apply Dr. Hendon's rule to nominating speeches. I think we all realize that when a man gets up to nominate another man he is for him.

W. E. Gardner, Louisville: I move the nominations be closed and the Secretary be instructed to cast the ballot of the House for Vice-President.

The motion was seconded and carried.

Secretary McCormack: Mr. President, I have the honor of casting the ballot of the House for Vice-President.

President Martin: Dr. H. G. Sandlin has been elected Vice-President.

Nominations are now in order for a Vice-President from Western Kentucky.

Secretary McCormack: I would like to nominate Dr. J. C. Morrison, of Hickman.

H. G. Reynolds, Paducah: I second the nomination.

A motion was regularly made, seconded and carried, that the nominations be closed and the Secretary cast the ballot of the House for Vice President

Secretary McCormack: Mr. President, I have the honor of casting the ballot of the House for Vice President.

President Martin: Dr. J. C. Morrison has been elected Vice-President.

Nominations are in order for Vice-President from Central Kentucky.

C. A. Vance, Lexington: I nominate Dr. W. B. Atkinson of Taylor County, Campbellsville.

Secretary McCormack: I would like to second the nomination, but he is a delegate.

W. B. Atkinson, Campbellsville: I would like to nominate Dr. Ed Palmer of Louisville for Vice-President.

A. W. Nickell: I move the nominations be closed and the Secretary instructed to cast the ballot.

The motion was seconded and carried unanimously.

Secretary McCormack: Mr. President, I have the honor of casting the ballot of the House for Vice-President.

President Martin: Dr. Ed Palmer is elected.

Dr. C. C. Howard was escorted into the room. (Applause)

C. C. Howard, Glasgow: Gentlemen, I deeply appreciate this honor. Next to the memory of my mother I hold this organization. I was raised by a doctor and he died early and I was raised by my mother way back in the country, and I appreciate this. I promise you that I will hold this office sacred and untanished. I thank you. (Applause)

President Martin: Next in order is the election of a Secretary. Nominations are now in order. This is for a term of five years.

A. W. Nickell: Gentlemen, this is one of the most important offices that is held in the profession of the State of Kentucky. I am not here this moring to extol the virtues of the present incumbent, but I think there is in him one of the greatest exemplifications of medical executives and health officers of any man that I have ever studied. This man not only has high perspectives and lofty ideals and concentration of purpose, fidelity to duty, and proper training, but he has made one of the best health officers that the State of Kentucky has ever produced, or any other state. (Applause)

It is not because he is my personal friend, but with peculiar pride and pleasure I have

the honor this morning of nominating for this splendid, exalted office, with all of its duties, the present incumbent, Arthur T. McCormack. (Applause and cheers)

T. A. Frazer, Marion: I want to say just a few things. It is said to be characteristic of old men that they reminisce, that they are dreamers. I reminisce some, but I am not a dreamer. The Bible tells us how we can recognize an old man. The old man dreams dreams and the young man sees visions. As long as you can see visions you are still young.

I am going back to twenty-six years ago to a meeting of the Kentucky State Medical Society that was held at Owensboro, when Dr. James G. Bullitt resigned as secretary on account of his health, to go eastward, and I have a perfect picture in my mind of the gentlemen that gathered around the conference table to try to find some man for secretary of the State Medical Society. Different men were suggested, were approached, and they declined to accept. Finally we had a meeting, and I am going to name some of the men that were in that meeting, long since past and gone. Drs. Cecil, Roberts, Aud, Carpenter, Barrow, of Lexington, Shirley of Winchester, J. H. Letcher of Henderson, Shoemaker of Morganfield, C. H. Todd of Owensboro, Richmond of West Kentucky, and many others were gathered in this conference to try to solve the problem of selecting a secretary for the State Medical Association who would be capable of going on with the work, building it up to this vision that some of us had been seeing for a number of years. Finally, we decided that we were going to elect Dr. Arthur McCormack.

He said, "Gentlemen, I am practicing medicine and I cannot serve you."

I said to his illustrious father, J. N. McCormack, "Arthur has always done what you told him in the past, hasn't he?"

He said, "He has."

I said, "You tell him that we want him to serve as secretary of the Kentucky State Medical Society and I believe he will serve."

We called Arthur in. His father said, "Son, we have decided to elect you secretary of the State Medical Society, not because we think you are qualified, but because we can't find any other man that will have it." (Laughter)

Arthur said, "Father, I want to practice medicine. The work in the future for the state secretary will take so much time when our organization develops the ideals that you and these other older men have been teaching us were coming to the doctors of Kentucky, that I don't feel I could give the time to make a competent secretary. Yet, Father, I have always made it a rule to do what you told me, and I am going to accept."

Consequently, twenty-six years ago at Owensboro we elected Arthur McCormack secretary. He has been secretary ever since that time. He has been the most efficient state secretary of any state in the Union. (Applause) Today he is a tower of strength in the Medical Association of Kentucky, the American Medical Association, and all the health organizations of the United States. He stands today closer to the committees in Congress or the House of Representatives when we want legislation than any man in the United States. Next to Hugh Young he stands closer to the Senate than any other man; the only reason that Hugh stands closer to the Senate is because he has removed the prostate of most of the Senators. (Laughter) It is not because he has more ability than Arthur McCormack, but we older folks that have had our prostates removed know how we feel toward the man that gets it.

I want to second the nomination of Dr. McCormack for Secretary and move that there be no objection, that the nominations be closed and he be elected by the casting of one ballot. (Applause)

President Martin: All in favor of Dr. McCormack as Secretary for the next five years rise to your feet.

The motion was unanimously carried.

President Martin: Dr. McCormack is elected Secretary.

Dr. Arthur T. McCormack was escorted into the room. (Applause and cheers)

President Martin: Dr. McCormack, by using methods of election that we use in Southeastern Kentucky, I finally got you over. (Laughter and applause)

It has been suggested that your speech be limited to one minute.

Secretary McCormack: I hope very much that after having attained this experience in my own candidacy, you will be able to apply the lesson in your own, Mr. President, and use the same methods and get the same results when it comes to being elected Representative.

I am very happy indeed that I have to this degree merited your confidence, and I will promise you that I will try my very level best to serve you faithfully.

It is perfectly natural that a man who has been honored by a great organization—I believe this is the greatest organization on the face of the living earth—is apt to get in sort of fixed ways and do things impulsively that he sees quickly, for the benefit of the organization. I need the brake of your advice as well as the affectionate and unanimous support you have always given me, and I will

appreciate it very much indeed if as you see things developing you will help me more than you have before, even to think them through clearly so that we can do the best work that has ever been done in the next year for the medical profession and the great people of this Commonwealth. (Applause)

PRESIDENT MARTIN: Next is the election of a Treasurer for five years. Nominations are in order.

JOHN W. SCOTT, Lexington: I wish to nominate the present incumbent, who in addition to his other qualifications is a good Treasurer. In honoring him, in a way we honor his great colateral kinsman, Ephraim McDowell. I wish to nominate Dr. Marshall McDowell for reelection to the office of Treasurer.

W. B. MOORE, Cynthiana: I second the nomination and move that the nominations be closed and the Secretary be instructed to cast one ballot for Treasurer.

The motion was carried.

SECRETARY MCCORMACK: I cast the ballot for Treasurer, Mr. President.

PRESIDENT MARTIN: Dr. McDowell is elected Treasurer.

Next is election of a delegate to the American Medical Association to succeed Dr. Virgil Simpson of Louisville, for two years. Nominations are in order.

A. W. NICKELL, Louisville: Mr. President, I have been asked to present the name of Dr. Virgil Simpson to succeed himself as representative of the State of Kentucky in the American Medical Association.

SECRETARY MCCORMACK: I would like to second the nomination of Dr. Simpson. Having been in the House of Delegates with Dr. Simpson, I know the valuable service he renders. He is a great thinker and is particularly adapted to the type of work, the hard work, that is done in the House of Delegates of the American Medical Association. His reports to us have been illuminating.

I disagree with Dr. Simpson about a great many things, as he does with everybody about most things, but he is one of the types of men that think for themselves, and it is that type that is needed badly in the House of Delegates of the American Medical Association.

This Association is very greatly honored by having him as a member of that body.

H. A. DAVIDSON, Louisville: I move the Secretary cast one ballot for delegate to the American Medical Association.

The motion was seconded and carried.

SECRETARY MCCORMACK: I am very happy to cast the ballot of the House, Mr. President.

PRESIDENT MARTIN: Dr. Simpson is elected.

Orator in Surgery. Nominations are in order.

A. W. NICKELL: I arise, gentlemen, in somewhat of an apologetic mood. You fellows just saw Dr. Owsley accosting me and whispering something in my ear. It wasn't, however, that they were going to eject me, but if I didn't know the present incumbent and the one who is coming in, also the Secretary, it might be that they would get together and have Owsley eject me for talking so much. But I have been asked to perform this very pleasant duty. I would like to present for nomination for Orator in Surgery for the coming year, a gentleman who is a member of the local profession of the City of Louisville in Jefferson County, a man who is well and favorably known to our profession, a man of rather unassuming, modest demeanor, a man who possesses ability and the traits and qualifications which would peculiarly fit him to prepare a splendid paper for us as Orator in Surgery.

It gives me great pleasure, therefore, to present to this House of Delegates the name of Dr. I. A. Arnold, of Louisville. (Applause)

LEON SOLOMON, Louisville: I second the nomination, and move that the nominations be closed and the Secretary be instructed to cast the ballot of the House for Orator in Surgery.

The motion was seconded and unanimously carried.

SECRETARY MCCORMACK: I have the honor of casting the ballot of the House for Orator in Surgery.

PRESIDENT MARTIN: Dr. I. A. Arnold is elected.

Nominations are in order for Orator in Medicine.

P. S. YORK, Glasgow: We have some wonderful eloquence in Graves County of a political nature, and Dr. Hunt exemplifies some of it, but I can assure you they also have doctors in that part of the state. (Laughter)

I wish to place in nomination the name of Dr. W. J. Shelton, of Mayfield, as Orator in Medicine.

H. H. HUNT, Mayfield: Being a member of the Graves County Medical Society, I want to second that nomination and to assure Dr. York that we have got not only doctors down there, but real folks. Dr. Shelton is a man of the highest character, and on behalf of the Graves County Medical Society I want to second that nomination.

H. G. REYNOLDS, Paducah: On behalf of McCracken County I want to back up Dr. Hunt in everything he says about Dr. Shelton. He is certainly worthy of the honor.

C. A. VANCE, Lexington: I want to nominate a man from Lexington. This man is the Secretary of the Fayette County So-

ciety. He has worked hard for that society, and we believe we have one of the best societies in the state. He is well qualified as an internist; he is graduate of Pennsylvania, and a Southerner, and he has been practicing in Lexington about ten years or more. I want to nominate Dr. John Harvey.

D. Y. KEITH, Louisville: I second the nomination.

J. E. EDWARDS, Lancaster: I wish to second the nomination of Dr. Harvey of Lexington.

PRESIDENT MARTIN: Are there other nominations? If not, the nominations will be closed and I will appoint, as Tellers, E. M. Howard of Harlan, Oscar Allen and Dr. White of Covington.

SECRETARY MCCORMACK: The nominees are Dr. W. J. Shelton of Graves County and Dr. John Harvey of Fayette County.

The ballot was spread.

PRESIDENT MARTIN: We will hear the report of the Tellers.

E. M. HOWARD, Harlan: Gentlemen. the report is: Dr. Shelton, 41 votes; Dr. Harvey. 19 votes.

PRESIDENT MARTIN: Dr. Shelton is elected.

SECRETARY MCCORMACK: Next is Councilor for the First District for five years to succeed Dr. V. A. Stilley.

PRESIDENT MARTIN: Nominations are in order.

P. H. STEWART, Paducah: The First Congressional District has been prominent in the annals of medical history for decades and decades. It was for ages and ages represented by one of the most outstanding men in Western Kentucky, until time came along and took him to his reward, and his shoes were filled immediately by a man who has proven himself to be as great as the old Richmond. Western Kentucky, the First Congressional District, would like to place in nomination the retiring Councilor, Dr. V. A. Stilley, of Benton, Kentucky. (Applause)

H. H. HUNT, Mayfield: I want to take this speech away from Dr. Stewart. Every man, woman and child, dog and hog in the First District is for Stilley for Councilor.

F. M. TRAVIS, Frankfort: I second the nomination.

A. W. NICKELL, Louisville: I move the nominations be closed and the Secretary cast the ballot for Councilor for the First District.

The motion was seconded and unanimously carried.

SECRETARY MCCORMACK: It is with a great deal of personal pleasure that I cast the ballot of the House for Councilor for the First District.

PRESIDENT MARTIN: Dr. Stilley is elected.

Nominations are in order for Councilor for the Third District.

J. H. BLACKBURN, Bowling Green: As representative of the bloody third and of ancient days, as secretary of the Third District Medical Society, I feel that I know something of the men of the Third District and their interest in organized medicine, and I want to place in nomination as successor to Dr. C. C. Howard, the name of Dr. C. C. Turner of Glasgow as Councilor for the Third District. (Applause)

P. H. STEWART, Paducah: I second the nomination.

V. A. STILLEY, Benton: I move nominations be closed and the ballot be cast for Third District Councilor.

The motion was seconded and carried unanimously.

SECRETARY MCCORMACK: I have pleasure in casting the ballot of the House.

PRESIDENT MARTIN: Dr. C. C. Turner is elected.

Upon motion of Dr. McCormack, seconded by Dr. Blackburn, Dr. Willard E. Bartlett, St. Louis, was elected an Honorary Life Member.

Nominations are in order for the place of meeting in 1934.

H. K. BUTTERMORE, Liggett: I wish to extend an invitation to the Kentucky State Medical Association in behalf of the doctors of Harlan County and the citizens of Harlan to hold your next meeting at Harlan, Kentucky in 1934. (Applause)

T. A. E. EVANS, Rowan County: I wish to extend an invitation to the Kentucky State Medical Association to come to Morehead, Kentucky. Morehead is a town situated in the foothills of Cumberland. The hills are not as high as they are at Harlan, I think, but you will appreciate the beautiful scenery.

We are located upon Highway 60. If you wish to drive it is a town easily gotten to. If you wish to come by train we are located on the C. & O. It is one of the finest trains that is run over the rails in the United States, the Washington. You might like to take a trip on that train and come to Morehead.

Further, we have another trunkline running from Cynthiana through to the Big Sandy Valley. It will be completed by that time, and it will be one of the most beautiful highways in the State of Kentucky.

While the little town of Morehead is a small town, a little country town that not many people know is on the map, it is not a town of any renown, we are there and we need you. The medical fraternity, as I understand it, gentlemen, is a body of men that are out to serve, that are out to help, and for various reasons that I would rather not

tell you now, we need the Medical Society of the State of Kentucky to meet one time in the Northeastern part of our state. You have been in the Western part, you go to the Central part, you go to the Southeastern part, but our end of the state some way or other you have never visted. I think it is because you have never had a cordial invitation. If you will come this time I will guarantee you that you will receive as fine an entertainment in Morehead as you have had in Murray, and that has been a very splendid entertainment. We have as much to offer you in Morehead, if not a little more. There is one thing we can have for you in Morehead that you haven't enjoyed here. I see that some of these boys are very anxious to shake the fantastic toe, and we will show you a splendid time that way. We will show you beautiful scenery, and I believe you can do a lot of good in the town of Morehead next year.

I have no conscientious scruples against Harlan. I love the people; I have some very dear friends at Harlan, but Harlan has the President of the State Board of Health of Kentucky, she has the President of the Society, and it does seem to me that we ought to be a little conservative and willing to divide up, so I want to invite you to Morehead next year.

JOHN W. SCOTT, Lexington: I want to second the invitation of the Doctor who has preceded me to the town of Morehead. One of the things that he did not emphasize, I think, as much as it should be emphasized is the fact that we have exactly the same physical situation that we have here. We would have the delightful buildings of the Normal School, which I understand would be available; we would have the same opportunity to get together that we have here, the splendid meeting places. While we appreciate the invitation of Harlan, it would be a pleasure to go to Dr. Martin's town, at the same time we cannot have there just what we have had here. I do not believe the hotels, as I understand it, would be sufficient to house us, and no matter what the hospitality of the homes may be, the practical thing and the pleasantest thing for men attending these meetings is to go into these dormitories, get together, have no other attractions but the meeting, and I wish to second Morehead as the meeting place.

LEON SOLOMON, Louisville: I nursed obedience at my mother's breast. I came down here and my friends Asa put a badge on me; it is the first time I have ever worn a badge. He said to me, "Now, Leon, I expect you to take your instructions from me and do as you are told." A moment ago when he understood that I was going to have a word to say that was contrary to his convictions (and Asa is a man not only of religious and medical convictions, but he has many other convictions), the fact of the matter is that I decided since I am going home with him I ought to be a little afraid to do what I am about to do for fear he will do me some physical damage. I am on the floor to keep him from speaking.

Asa reminds me of a picture of Theodore Roosevelt with his mouth wide open. The story is told that he comes into the town of Albany, New York, he is very thirsty, it is twelve or one o'clock at night, he wants some charged water, he goes down to a drug store, one of these drug stores that is open day and night, and just behind the words "Open Day and Night," he sees a photograph of himself with his mouth wide open.

I believe that it would be advantageous for this organization to meet at Morehead. It is more accessible than Harlan, wonderfully reached by those air-cooled cars of the C. & O., and easily reached by land by automobile. I think it is a great disadvantage to get into a town and to know in advance that their opportunities for housing and for caring for you may be not as good as you have been accustomed to, and a smaller group of men might be accommodated in Harlan advantageously, but there will be a large group next year, we hope. As Will Rogers says, Santa Claus is going to come as the result of NRA, and doctors will have a little more money. I think it is to our advantage to select Morehead as the place of our next meeting.

Asa, I am sorry I had to do that.

E. M. HOWARD, Harlan: I don't want to undertake to persuade this House of Delegates to vote for Harlan for any special reason. I would like to go to Morehead. We have had meetings all around there. The question is, what do we want when we go to our medical meetings? What is it we are looking for? I don't know, from what has been said, just what to expect. Are we going to see buildings, or something of that kind?

In Harlan, the first thing to consider is getting there, and we have one of the most wonderful roads you can imagine. You can ride in there on concrete and never get on anything but highly improved roads. We have one road that runs from Chicago to Savannah, Georgia, straight through the county one way. You can get there. There is good train service and there are good roads.

When you get there you can be taken care of. You can't be taken care of as they take care of you in Louisville or Lexington. We

haven't as large buildings as they have here at Murray or at Richmond or Bowling Green or probably at Morehead, but we have a medical society in Harlan, we have some fifty-odd doctors, and we have nearly all of them, forty-odd, in that medical society. We attend our medical society meetings, we are interested in the medical society; Harlan has doctors that are interested in what you gentlemen are interested in. We haven't anything to sell you up there, but we would like awfully well to have you come if you want to come.

When I got here Monday, several doctors said, "Howard, we are going to Harlan next year."

I said, "That's news to me, we're glad to hear it."

Knowing that our facilities are not as good as they are in some places, I haven't asked a man in this House of Delegates to vote for Harlan, but I do want to say, gentlemen, if you want to go to Harlan we can take care of you, and we will do it in the biggest way possible and we will appreciate your coming.

I wouldn't want it said that you were coming to visit us in Harlan and you were not made cordially welcome.

Dr. Howard read a letter from the Kiwanis Club inviting the Association to meet in Harlan in 1934.

DR. HOWARD: Gentlemen, there are a lot of the doctors in the State of Kentucky that are in the mountains. The mountain section has grown and developed to the point where it is important. I advocated coming to Murray this year, and I am in the county farthest away from Murray, but there are many good doctors and good people here, and I know we were all glad to come.

If you want to go to Harlan we will be glad to have you.

J. N. BAILEY, Paducah: May a visitor who is not a delegate say just a word as a member of the State Medical Society?

PRESIDENT MARTIN: Yes, sir.

DR. BAILEY: I moved from Missouri to Kentucky a little over thirty years ago. I located in Paducah, down near Mills Point. I had been promising myself ever since locating there that I was going to visit Eastern and Southeastern Kentucky. Only last week I fulfilled that promise to myself, and I am just now on the way back home.

On last Thursday night I spent the evening in Harlan, Kentucky. I want to disabuse some of our good doctor friends' minds that they haven't accommodations there to take care of you, because they have. I want to disabuse their minds of the fact that they haven't good roads to get there, because they have; I have just got in and out. I want to disabuse their minds of the fact that there isn't the most pure-bred Anglo-Saxon kind of people in the world there that you will meet and come in contact with, for there are. They will look you in the eye and say, "I like you." They are wonderful entertainers. I thought Paducah had hospitality, gentlemen, but they haven't anything on Harlan, and I am one of the last men to admit it.

When they say they are going to entertain the Kentucky State Medical Association, if you see fit to go there you will have a good time. I am going back soon whether the State Association goes there or not, because I enjoyed it, and enjoyed my visit.

From a scenic standpoint I question whether you could go anywhere in the United States and enjoy it more. You are near Pineville, you are near Middlesboro, you are near Lynch, which is one of the greatest commercial centers of the coal industry of any place in the world, with the largest shaft in the world in which the company owns everything, lock, stock and barrel, from the churches and schools to the depot and on down. It is a treat to see that.

DR. MURPHY, Maysville: I have a telegram here from the President of the Mason County Society, W. G. Phillips, inviting you to hold the next meeting at Maysville, and another on behalf of the citizens of Maysville signed by the Mayor inviting you to Maysville for your next regular meeting.

Dr. Phillips was sick in bed when I left Wednesday. I am telling you this because I overheard some conversation that I was the only one here from our county. That is right, I am, but am here to represent that county. You have had a representative here who has done the job splendidly for years, and it has been a task for me to do it.

Maysville is located on the Ohio River about sixty miles up the river from Cincinnati, at the entrance to the Blue Grass section of the state. We have just celebrated our hundredth anniversary of the incorporation of Maysville as a town.

The hotel facilities there are absolutely adequate to take care of this crowd, or as big a crowd as there was in Louisville, almost. We have six hotels. Three of them are of the highest type. The man who owns the New Central Hotel formerly owned the Fountain Square Hotel in Cincinnati, and he knows how to entertain.

With no exceptions at all, we have got anything up there that you want and any of you can get it. I want to invite you to Maysville, Kentucky.

PRESIDENT MARTIN: As President I don't like to have much to say about this, but I

am sure that Dr. Buttermore in his invitation to Harlan didn't tell you where it was, because he knew you all knew where Harlan was. He didn't have to tell you where it was. I feel this way about it: I wouldn't invite any man home with me, or fifty men, without having some place to put them to bed and something for them to eat.

I have been asked for several years: Why not invite this State Medical Society to Harlan? I felt back at that time that we were not able to take care of it. We do feel at this time that we are able to take care of this organization, otherwise we wouldn't invite you.

It is true that we can't give you hotels like the Seelbach or the Brown, or accommodations of that kind, and it is true that we will have to have some of our meetings in churches. I want to tell you that we have a Baptist Church in our town that has something near a hundred rooms. Of course, in telling you that you can see that the Baptists are in the lead there, just like the Republicans. Anyway, we have ample space. Dr. Howard was in our town week before last, the first time he was ever there. I left my office, went out and tried to show him over our town, and took him to one of these churches, not with the idea in view at that time that we would have the State Medical Meeting there, but he mentioned this: "Martin, why not have the medical meeting here? You can take care of it."

Gentlemen, I feel as your President and also as a citizen of Harlan that it would be a great pleasure for me to have this meeting in Harlan, but I also feel this way about it: We have given you the invitation. Dr. Howard has several letters that I received yesterday. I have still more that came very near being too late, and possibly are, but we extend that invitation. It is up to you to accept it. That is the way we mountain people feel. If we had you up there we would make you go home with us, but we can't come down in West Kentucky and drag you up there from any other part of the state.

Are there any other places that want to invite the Association?

C. W. Shaw, Alexandria: Maysville is in Northern Kentucky, a section of the state much liked by the State Medical Association, and I am sure you will be well entertained at Maysville.

Secretary McCormack: Mr. President, I would have kept still, as I generally do, but as long as the President has been good enough to give us something from the bottom of his heart I want to say to you very sincerely that I don't believe there are two better medical societies in the United States than the Harlan County Medical Society and the Mason County Medical Society. They are organized, they meet, they are doing splendid work, and they are deserving of everything that we can give them that they ask us for. They are two great organizations in two great towns, and I don't believe there are more hospitable people anywhere than there are in those two towns. If we went to either of them and if ten times as many of us went to either of them, they would take care of us, they would share with us everything they had, and give us everything they have got.

But, Mr. President, the important thing for us is not the response to the proper local pride that every town in Kentucky has in its own citizenship and in its own hospitality, they are all just alike about that, the littlest town in the state and the biggest are like that, thank the Lord; they are all glad to have us come in amongst them. But for the last several years we have rather adopted a policy that seems to me to be such a wise policy. We started it with the meeting at Richmond and then continued it at Bowling Green and at Lexington and here; we have been meeting in these great academic institutions where we have the academic atmosphere, and where we are located just far enough from the borders of the state that those on the borders can get there easily, and yet we are accessible to the others as we go around, about a hundred miles from the border, as each of the towns in which these colleges are located are. I believe we are having the happiest results that we can possibly get in our meetings in this way. I don't think anything has ever happened that has improved the morale of the meeting as has holding them in these great institutions; they are ours, they belong to us, we are interested in their development and in knowing about them.

I believe that although Morehead has no claim from the medical standpoint comparable to either of the other places, in the interest of these splendid men who represent both Harlan and Maysville I may say I know the amount of work that is required to organize a medical meeting in any town except in these institutions; these officials that are in charge of these institutions are our servants and are happy to have us with them, and we have an atmosphere that I believe is unexcelled.

E. M. Howard: We have an invitation here from the Baptist Church that has a membership of over 2,000 people and has a seating capacity of over 2,000; an invitation from the Presbyterian Church, and from the Methodist Church, another from the Episcopal Church; we have not one from the Catholic Church, but we have a beautiful church there

that seats several hundred, and I am sure they would send one.

A motion was regularly made, seconded and carried that the nominations be closed, and the ballot was spread.

SECRETARY MCCORMACK: While the ballot is being spread I would like to present two or three committee reports.

WHEREAS, The recent death of Dr. Robert L. Woodard, of Hopkinsville, Kentucky, has been noted with regret by this body; and

WHEREAS, He was loved and honored by every member of this group for his unfailing devotion to our common cause, serving us with distinction as president of the organization and striving by his precepts and example to uphold the dignity and honor of the profession; and

WHEREAS, He was unselfish of his time and ability in his ministrations to the suffering humanity of his community, untiring in his efforts to promote the interests of public health and the welfare of the people of the state at large, and imbued with the desire to serve others; and now therefore be it

RESOLVED, That the Kentucky State Medical Association deplores his untimely death, extends its heartfelt sympathy to his family, and sincerely regrets the loss of his professional association; that, in his passing the medical profession has lost a worthy member whose ideals were always ethical and courageous; that a copy of these resolutions be spread upon the minutes of the transactions of the Association, and that a copy thereof be sent to the members of his family.

This is presented by the Committee on Resolutions, Milton A. Gilmore, Chairman.

I move the adoption of the resolution.

The motion was seconded and unanimously carried.

SECRETARY MCCORMACK: Next, is the report on Workmen's Compensation:

We, the members of the Committee on the Workmen's Compensation Law, upon investigation of existing conditions, submit the following report.

We find that the $200 medical limit allowed by the Workmen's Compensation Law of the State of Kentucky is totally inadequate and inconsistent with the proper care of seriously injured workmen, and that no injury of a serious nature can possibly be treated in a hospital, and all the expenses covered, for this amount.

We also find, upon investigation, that the honest, reliable and responsible insurance companies and their adjusters do not limit themselves to $200 for medical services to injured workmen, but will pay any reasonable amount beyond the $200 to secure good results for their injured man. In fact, the above-mentioned companies completely ignore the medical limit of $200 as allowed by the compensation law of Kentucky today, and are willing to pay just fees to doctors, nurses and hospitals, and everyone else concerned in securing good results for them.

We find that there are certain unscrupulous, disingenuous insurance companies and adjusters who merely use the $200 medical limit as a smoke screen behind which to hide. The result is that when a seriously injured case runs over the $200 medical limit, the bills are prorated, the doctor is not paid a just fee for his work, the nurse is not paid for her long hours of service, and the hospital receives practically nothing at all for its many months' care of this type of insurance company's patients.

These unscrupulous, disingenuous insurance companies and their adjusters and legal representatives, through their unfair practice of proration of medical bills, have caused the doctors, nurses and hospitals of the State of Kentucky to lose many thousands of dollars each year.

We, the Committee on Workman's Compensation, feel that the present Compensation Law of the State of Kentucky is unfair to the doctors, nurses and hospitals and that aggressive steps should be taken before the state legislature to protect the medical profession and its associates from this obviously unfair law which permits unscrupulous insurance companies to prorate medical bills.

RECOMMENDATIONS

We, the Committee, recommend that the Kentucky State Medical Association ally itself with the Kentucky State Hospital Association and the Kentucky State Nurses' Association and that these allied associations shall go before the Kentucky legislature and that they shall demand a limit of $700 for medical care of injured compensation cases instead of the now existing $200 medical limit.

We further recommend that in special cases, by application to the Workmen's Compensation Board of the State of Kentucky within a limit of ninety days, this $700 medical limit can be raised to $1000, or the amount of $300 in excess of the $700 medical limit for ordinary cases.

We recommend an immediate, aggressive and intensive campaign on this subject and that the Compensation Law of the State of Kentucky be rewritten and brought up to the standards of other progressive states, many of which have no limit at all on medical expenses of compensation cases.

CONCLUSIONS

These recommendations will in no way in-

crease the rate nor work a hardship on the honest, reliable insurance companies who are soliciting compensation insurance in this state. It might possibly work a hardship on the unscrupulous, disingenuous insurance companies doing business in the state, but as we see it, the workmen, doctors, nurses and hospitals would be much better off if insurance companies of this type were not permitted to do business in the State of Kentucky.

FRANK P. STRICKLER, Chairman.

I move the report be approved.

The motion was seconded and carried.

PRESIDENT MARTIN: We are not in politics by any means. It doesn't make any difference to me whether you are a Democrat or a Republican, but I have been to the present legislature three different times since they have been in session and they have done nothing; we have done more down here this week than they have done and will do from now until Christmas unless we get behind them. I went to the legislature in order to push our Representatives and Senators to the front, and I want to say to you that they are there, they are trying to do something constructive, trying to do something to get a bill through that is going to take care of between 600,000 and 700,000 indigent people in this state during the coming winter. It is going to be a critical condition. I wouldn't be surprised if we had a revolution unless something is done to aid these people, and you can't blame them for what they do in a land of plenty with people starving.

I believe it is a good idea for every member of this House of Delegates and every doctor in the State of Kentucky to urge upon your Representatives that they do something. I am not saying how to get money to help these people, but it is a shame for us to have it said that Kentucky stood back when there were eight million dollars offered for three million dollars. I believe the thing for us to do is to get to work at once. I am afraid that there are things wrong in that legislature, I am afraid that there is too much money being used to oppose bills that should pass.

I don't care anything about your feeling on the general sales tax or the whiskey tax or the cigarette tax or the general tobacco tax or the coal tax, it doesn't make any difference to me how you feel about that, but let's do urge upon those men whom we are paying to represent us that they do something constructive. (Applause)

DR. FRAZER: I want to make a motion that this House of Delegates send a telegram to the Governor, the Lieutenant-Governor, and to the Speaker of the House, expressing to them our opinion that this is urgent and that they should make some provision at once to provide for the needy of our state. We have people in our county today, gentlemen, that are hungry that are willing to work. There is work there that they could do if the legislature would make some provision to furnish Kentucky's part of the money. It is a disgrace to the State of Kentucky that a legislature will go up there and dilly-dally, swap horses in politics, play to this faction and to that faction, when Kentuckians are going hungry. That is my motion.

The motion was seconded, put to a vote, and carried.

MILTON A. GILMORE, Hopkinsville: I wish to move you that the House of Delegates on behalf of the Kentucky State Medical Association extend its thanks to Dr. Ben B. Keys for his personal interest in arranging for this meeting.

SECRETARY MCCORMACK: I want to suggest that you include the officials of the College and the newspapers and the people of the town, and especially the Woman's Auxiliary and the local committee. We will write all that in.

The motion was seconded and carried unanimously.

PRESIDENT MARTIN: The vote on the place of meeting is as follows: Morehead 24, Harlan 28, and Maysville 8.

DR. VANCE: A majority of votes has not been cast so you have to have another vote.

W. B. ATKINSON, Campbellsville: Mr. President, I move you that the Secretary be instructed to cast one ballot for Harlan.

SECRETARY MCCORMACK: You'd better not leave it to me.

W. E. GARDNER, Louisville: I would like to ask the Secretary, who knows the technicalities of the parliamentary procedure and rules of the Society, is it necessary in this sort of a selection that a majority prevail?

SECRETARY MCCORMACK: The rule is when a vote is taken by ballot that it requires a majority vote in all elections, and this is in the nature of an election.

W. E. GARDNER: Would this House have authority to vote that the majority prevail? Would that be against the Constitution?

SECRETARY MCCORMACK: It can be done by a vote; a vote can be made that the rules be suspended and the ballot be cast.

W. E. GARDNER: Can that be done?

SECRETARY MCCORMACK: Well, I doubt it. It is required to be done by ballot.

Maysville is dropped under the By-Laws.

The ballot was spread again, the vote resulting as follows: Harlan 37, Morehead 21.

SECRETARY MCCORMACK: I move you, sir, that the accounts for the meeting and the current accounts when approved by the Council be ordered paid.

The motion was seconded and carried.

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SECRETARY MCCORMACK: The following is the report of the Committee on the STATE MEDICAL JOURNAL:

The Committee on the JOURNAL finds that the JOURNAL fulfills its purpose and meets the needs of the practitioners in the state. The articles are diversified, well presented, and cover the field of medicine and surgery, including the specialties.

Unfortunately the typing is poor, and this detracts from the appearance of the JOURNAL. Your Committee feels that its value could be enhanced to the profession by printing brief extracts of timely articles from the national and foreign journals.

The criticism in the past concerning the Woman's Auxiliary Department in the JOURNAL still continues to reverberate, but this is no longer valid since the Woman's Auxiliary edits its own supplement without any expense to the profession.

Respectfully submitted.

J. D. WILLIAMS, Ashland
G. R. KEENE, Scottsville
O. O. MILLER, Louisville.

Following is the report of the Committee on Periodic Health Examination:

Your Committee is not conversant with any concerted action or leadership on the part of the profession in urging periodic health examinations.

This is being done sporadically by certain lay organizations such as the tuberculosis associations. The public is greatly interested in health matters and are receptive to health information. It is regrettable that there is no organized or concerted effort on the part of the profession to foster this health movement.

It would seem feasible that an annual physical examination could be stressed by the local medical societies during the annual drive for the sale of Tuberculosis Christmas Seals, the local society to volunteer to make such health examinations without charge for the purpose of selling the idea to the public and

demonstrating to them, the value of such an annual appraisal of one's health.

Respectfully submitted,
W. B. HENRY, Crutchfield
W. H. SMITH, Danville
O. O. MILLER, Louisville.

C. G. DAUGHERTY, Paris: The Committee on the Report of the Council begs to endorse the report of the Council as submitted at the 1933 session at Murray, Kentucky, and to approve the appropriation therein recommended and including lectures on obstetrics by Dr. McCord of Atlanta as part of an extension course for 1934.

C. G. DAUGHERTY, Chairman
E. L. GATES
Committee.

Upon motion of C. G. Daugherty, this report was unanimously adopted.

SECRETARY MCCORMACK: I have here the report of the Committee on Hospital Standardization, which, upon motion was adopted.

Your Committee on hospital standardization begs leave to submit the following report:

In spite of untoward conditions, efforts mainly through the Council on Medical Education and Hospitals of the A. M. A. and the Committee on Hospital Standardization of the A. C. S. to classify and standardize hospitals have gone on apace. The results of such efforts have apparently lagged somewhat in Kentucky and throughout the country in the last year or two. It appears that the principle of hospital standardization is generally accepted. Most of the members of our profession, we feel sure, recognize the importance and even the necessity for such work.

Your Committee would call attention, however, to the following facts relevant to the present condition since they influence efforts of standardization:

1. The increase in hospital beds in the United States and about proportionately in Kentucky has, through a period of some three or four decades been six times the increase in population. In the country as a whole there is now one hospital bed to every 124 persons. In Kentucky there is one hospital bed to every 192 persons approximately. In other words, the saturation point has been reached in the matter of hospital capacities though distribution is still a problem.

2. Financial stress has caused curtailment of equipment and services in certain of our hospitals, and closure of several.

Idle beds, charity patients and part-pay patients tell the story. Hence, certain hospitals which perform a much needed service for their respective communities have failed in spite of willingness of the management to maintain personnel and equipment necessary to secure better rating.

3. There has been an increased patronage of government-owned (federal, state, county and city) tax-supported hospitals and a corresponding decrease in the patronage of other hospitals.

Finally, Kentucky has 117 institutions of all classes for the care of the sick, with a bed capacity of 13,574. Kentucky has eight institutions which were refused registration by the A. M. A. Council on Hospitals for one reason or another. These have 175 beds and comprise only one per cent of the total beds in Kentucky. This percentage of unregistered hospitals in Kentucky corresponds almost exactly with that of the country as a whole, i. e. a little over one per cent. Kentucky's position in this matter is well up in front.

Your Committee is in full accord with the hospital program and hopes the work of standardization will progress without hindrance. We suggest, however that, in these difficult times the program be not enforced too rapidly as to curtail basic hospital services in certain of our less favored communities.

The Committee.
WALTER HUME, Chairman.

PRESIDENT MARTIN: We have one matter to look after, the costs of medical care reported by Dr. Abell. I think that Dr. Vance can explain that to you better than anyone else. He is the Chairman of the Council.

C. A. VANCE: We had planned to have a special meeting on the Costs of Medical Care. I think the first meeting of the House of Delegates was in effect that, and to bring it up before this meeting. I would suggest that the resolutions that Dr. Abell handed in and wrote pretty well fulfill what we think about it. I think it would be a good idea to accept his thoughts on the subject and take them as our own in the House of Delegates. Is that all right?

PRESIDENT MARTIN: Yes, sir.

J. E. EDWARDS, Lancaster: We have had resolutions passed by the Garrard County Medical Association with regard to the costs of medical care and not having understood that these resolutions were to be read at the first meeting, in fact it seemed to me they were out of place in that meeting. I did not present them. I have them with me this morning and I wish to be allowed to present these resolutions to be printed in the STATE MEDICAL JOURNAL, as follows:

The Garrard County Medical Association in a called meeting for the purpose of discussing the report of the Committee on the Costs of Medical Care adopted the following resolutions:

First, we wish to express our high appreciation for the enormous amount of research

work done by the Committee and for the many statistical reports made.

Second, we wish to recognize the outstanding ability of the Committee and apologize for making suggestions or recommendations.

Third, we recognize the fact that these problems are world-wide and must of necessity affect all classes of people, therefore our sugges'ions and recommendations may be in place.

Fourth, we are opposed to any organization, whether it be national, state, local, group or insurance which will in any way disturb the relation of physician and patient, because we believe such interference destroys the initiative of the physician and lowers the standard of service rendered and at the same time lessens the confidence of the public in the ability of the physician. We believe that the local physician is much more able to adjust himself to the social and economic condition of his community than can be done by any political, legislative or dictatorial group, whether located locally or in some foreign port.

Fifth, we believe that the first duty of a grateful government should be to those who defended it in time of war and there should be no restrictions placed on the government in the hospitalization and in the medical service rendered those disabled in its defense, except that medical service rendered should apply only to patients confined in a government hospital and to those within its service.

Sixth, we are opposed to contract practice.

We therefore agree in the main with the Minority Report in Synopsis No. 1.

Seventh, we oppose both the Majority and Minority Reports of Synopsis No. 2, thereby expressing our opposition to any further extension of the Public Health Service, and suggest that all reasonable means be used to curtail such service, because we believe that it deprives the local physician of practice that he deserves and has earned and makes those to whom such service is rendered dependent on free service and lessens in them a desire to be self-supporting citizens. The function of the Public Health Service should be limited to executive, instuctional and statistical duties, and this should be so organized that the local physician would be the principal basis through which such could be affected.

Eighth, we oppose the whole idea of group payment, insurance or taxation of any type as a basis of payment of medical fees. We oppose the evaluation of medical service by state or any other political organization and oppose the co-ordination of rural and urban service. We believe that any of these can do nothing except to lower ethical standards of the medical profession. This is our reaction to Synopsis No. 3.

Ninth, in Synopsis No. 4 we accept the Minority Report.

Tenth, we favor the highest qualifications and training of all groups mentioned in Synopsis No. 5 of the Majority Report, but vigorously oppose any attempt to substitute any of these for the local physician. We whole-heartedly agree with the Synopsis of Minority Report No. 5.

Eleventh, we oppose Synopsis No. 6 of the Minority Report. We have failed to find in the report any reason for such an attempt.

Twelfth, we oppose Minority Report Synopsis No. 7.

We realize that the county medical society cannot alone care for the poor in its community and do not believe that it should be expected to do so. We believe the physician is willing today, as he has always been, to render service to those in need without regard to their financial condition, but believe that it is an imposition to expect the physician to bear the increasing burden of pauper practice. The physician will be glad to join with other bodies or organizations in making plans as to how this burden of caring for the poor may be distributed to the whole people. We believe that such plan can be worked out in any local community if political organizations are avoided.

F. M. Travis, Frankfort: The Franklin County Medical Society adopted the Minority Report of your Committee section by action, as follows:

Q. No. 1. Ans. Yes.
Q. No. 2. Ans. Yes.
Sec. B, Q. No. 2. Ans. Medical Profession.
Q. No. 3. Ans. Yes.
Q. No. 4. Ans. Suggestion: Recommend that five years' general practice be a prerequisite to specializing.
Q. No. 5. Ans. Yes.
Q. No. 6. Ans. Yes.
Q. No. 7, Sec. B. Ans. We recommend the Government take care of the poor by its agency working through the County Medical Society.

The Franklin County Medical Society further recommends that a certain per cent of income of each employee of the federal, state and all business enterprises be held by their employer to take care of each employee's neglected financial obligations.

Respectfully submitted.
The Franklin County Medical Society,
F. M. Travis, Delegate.

J. W. Armstrong, Berea: Resolutions for medical service in Madison County, Kentucky, submitted to Kentucky State Medical Association:

1. Agreeing with both the majority and

minority reports that adequate, scientific medical service and facilities should be made accessible to all the people, and believing that it is beyond the ability of any individual practitioner to deliver such service we concede the superiority of group practice; however, under present circumstances, including lack of trained personnel for one or more groups and means of financing one or more groups, we recommend for the present that medical service continue under the present system of individual practice, except that means be made available for medical care of the indigent.

2. That all basic public health services be made available to the entire population, but that public health services be kept separate from care of the sick.

3. We believe the prospects of financing medical practice in Madison County through group payment of insurance to be poor, because of the lack of a regular income of most of its inhabitants. Financing through taxation is therefore preferred.

4. We agree with the recommendation that the study, evaluation and coordination of medical service be considered important functions of every state and local community.

5. That improved facilities for postgraduate instruction be made available to the medical profession and that the social aspects of medicine be given greater attention.

J. D. Farris, President
Madison County Medical Society.
A. F. Cornelius
J. H. Rutledge
O. F. Hume,
Special Committee.

Secretary McCormack: I move that the thanks of the Association be extended to Dr. Barbour, who has just retired after a remarkable year, and to Dr. Martin for his urbane, fair and excellent methods of conducting the business of the Association during the session.

The motion was seconded and carried.

Upon motion regularly made, seconded and carried, the meeting adjourned sine die at 9:30 o'clock.

A. T. McCormack, Secretary.


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Incorporated

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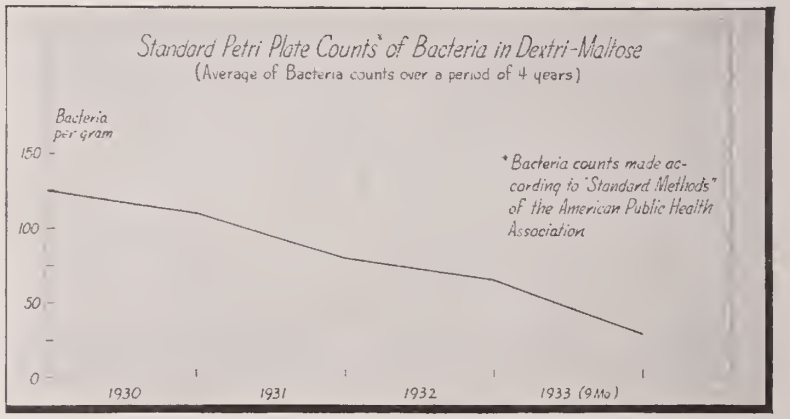
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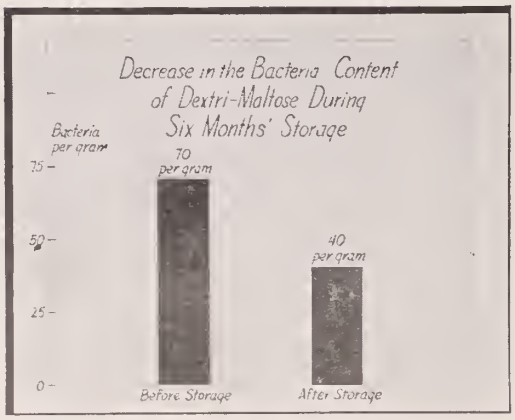
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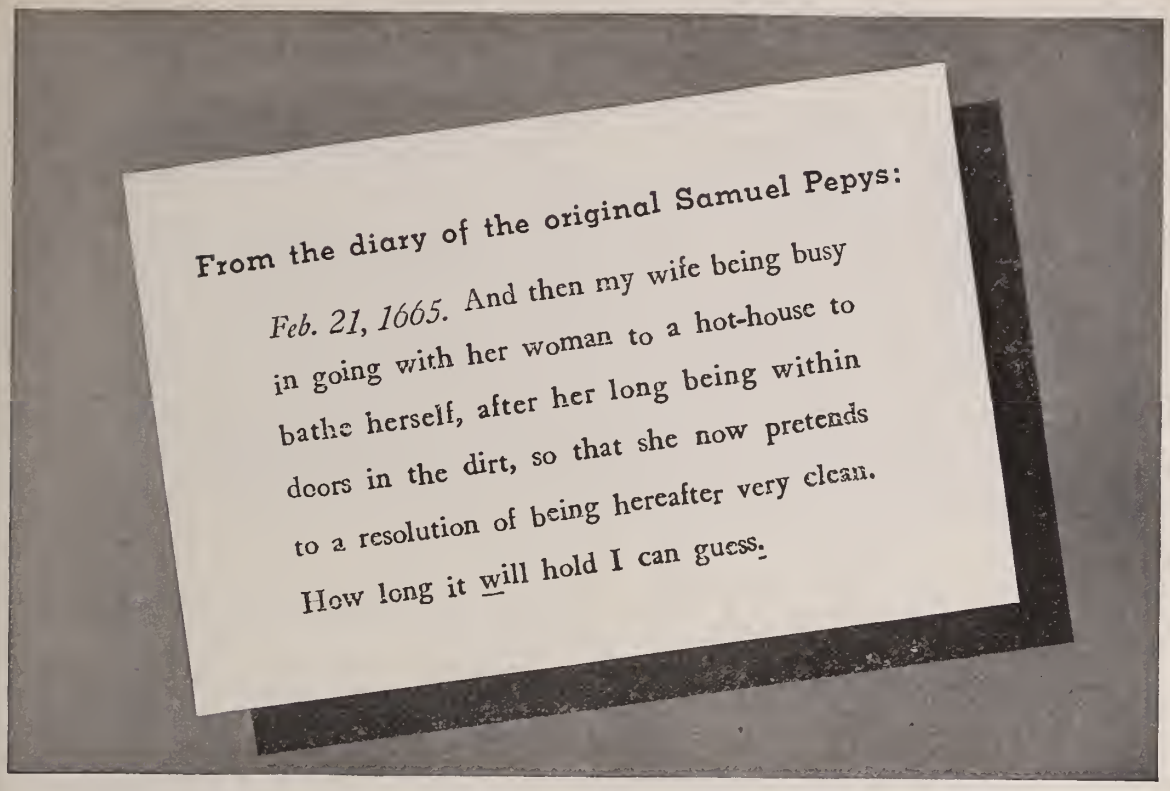
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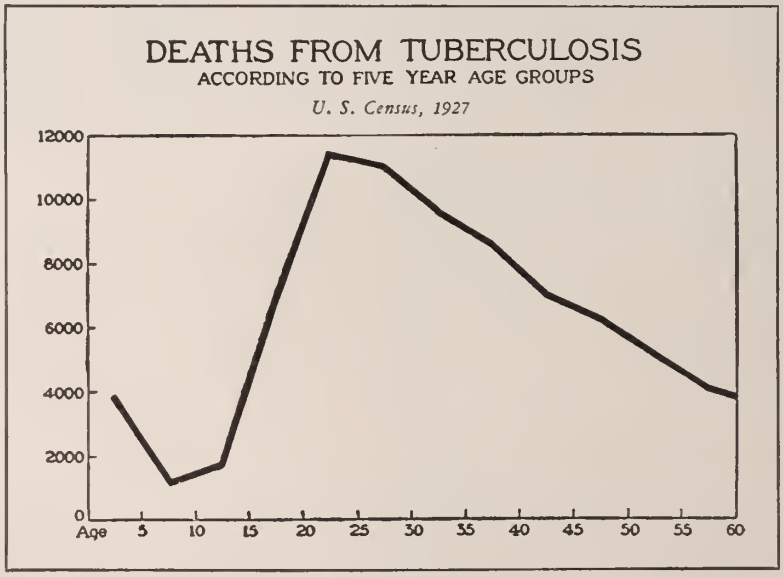
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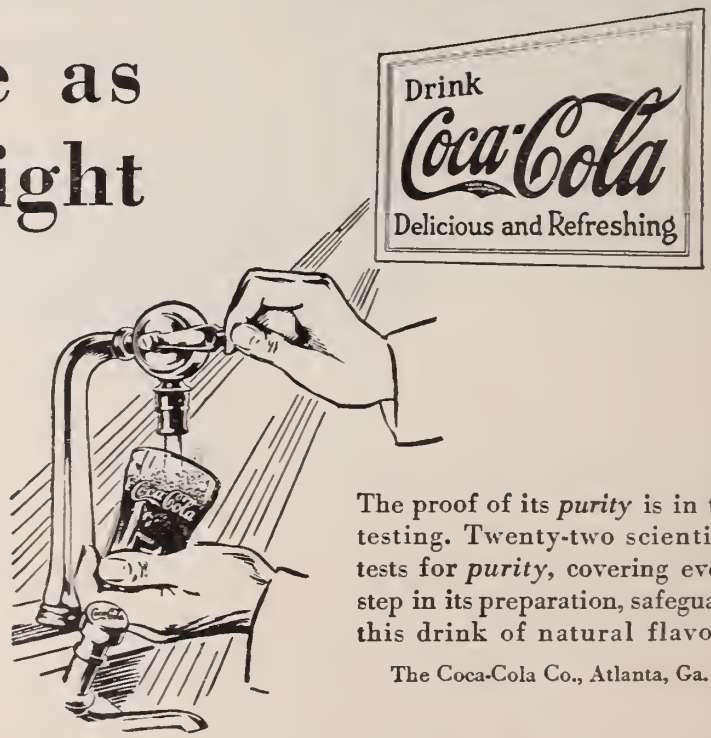
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## CALENDAR OF COUNTY SOCIETY MEETINGS

| COUNTY | SECRETARY | RESIDENCE | DATE 1933 |
|---|---|---|---|
| Adair | W. J. Flowers | Columbia | February 7 |
| Allen | A. O. Miller | Petroleum | February 24 |
| Anderson | J. B. Lyen | Lawrenceburg | February 5 |
| Ballard | F. H. Russell | Wickliffe | February — |
| Barren | Paul S. York | Glasgow | February 21 |
| Bath | H. S. Gilmore | Owingsville | February 12 |
| Bell | O. P. Nuckols | Pineville | February 9 |
| Boone | R. E. Ryle | Walton | February 21 |
| Bourbon | W. B. Hopkins | Paris | February 15 |
| Boyd | M. D. Garred | Ashland | February 6 |
| Boyle | P. C. Sanders | Danville | February 13 |
| Bracken | J. M. Stevenson | Brooksville | February 5 |
| Breathitt | O. M. Goodloe | Jackson | February 20 |
| Breckinridge | J. E. Kincheloe | Hardinsburg | February — |
| Bullitt | S. H. Ridgeway | Shepherdsville | February — |
| Butler | G. E. Embry | Morgantown | February 7 |
| Caldwell | W. L. Cash | Princeton | February 6 |
| Calloway | W. H. Graves | Murray | February 14 |
| Campbell-Kenton | Luther Bach | Bellevue | February 1-15 |
| Carlisle | G. W. Payne | Bardwell | February 6 |
| Carroll | J. M. Ryan | Carrollton | February — |
| Carter | R. G. Townsend | Grayson | February 13 |
| Casey | Wm. J. Sweeney | Liberty | February 22 |
| Christian | M. A. Gilmore | Hopkinsville | February 20 |
| Clark | R. H. Scobee | Winchester | February 16 |
| Clay | J. L. Anderson | Manchester | February 13 |
| Clinton | S. F. Stephenson | Albany | February 17 |
| Crittendon | C. G. Moreland | Marion | February 12 |
| Cumberland | W. F. Owsley | Burkesville | February 7 |
| Daviess | Wm. L. Woolfolk | Owensboro | February 13-27 |
| Elliott | | | February — |
| Estill | Walter Cox | Irvine | February 14 |
| Fayette | John Harvey | Lexington | February 13 |
| Fleming | J. B. O'Bannon | Flemingsburg | February 14 |
| Floyd | E. E. Martin | Allen | February 9 |
| Franklin | W. S. Snyder, Jr. | Frankfort | February 1 |
| Fulton | Glynn F. Bushart | Fulton | February 14 |
| Gallatin | J. M. Stallard | Sparta | February 15 |
| Garrard | J. B. Kinnaird | Lancaster | February 15 |
| Grant | C. A. Eckler | Dry Ridge | February 21 |
| Graves | H. H. Hunt | Mayfield | February 6 |
| Grayson | R. F. Porter | Leitchfield | February 22 |
| Green | S. J. Simmons | Greensburg | February 5 |
| Greenup | Carl M. Gambill | Greenup | February — |
| Hancock | F. M. Griffin | Hawesville | February 5 |
| Hardin | D. E. McClure | Elizabethtown | February 8 |
| Harlan | Clark Bailey | Harlan | February 24 |
| Harrison | W. B. Moore | Cynthiana | February 5 |
| Hart | S. F. Richardson | Munfordville | February 6 |
| Henderson | Walter O'Nan | Henderson | February 12-26 |
| Henry | Owen Carroll | New Castle | February 26 |
| Hickman | Chas. Hunt | Clinton | February 1 |
| Hopkins | David L. Salman | Madisonville | February 1 |
| Jackson | | | February 3 |
| Jefferson | Chas. M. Edelen | Louisville | February 5-19 |
| Jessamine | J. A. VanArsdall | Nicholasville | February 22 |
| Johnson | P. B. Hall | Paintsville | February 10 |
| Knott | M. F. Kelley | Hindman | February 24 |
| Knox | F. R. Burton | Barbourville | February 23 |
| Larue | D. V. Gaddie | Hodgenville | February — |
| Laurel | Oscar D. Brock | London | February 14 |
| Lawrence | L. S. Hayes | Louisa | February 19 |
| Lee | A. B. Hoskins | Beattyville | February 10 |
| Leslie | John H. Kooser, Acting Secretary | Hyden | February — |
| Letcher | R. Dow Collins | Whitesburg | February 27 |
| Lewis | J. D. Liles | Vanceburg | February 19 |
| Lincoln | Lewis J. Jones | Houstonville | February 16 |
| Livingston | John L. Hayden, President | Salem | February — |
| Logan | Walter Byrne, Jr. | Russellville | February 5 |
| Lyon | | | February 20 |
| McCracken | Leon Higdon | Paducah | February 14-21 |
| McCreary | R. M. Smith | Stearns | February 5 |
| McLean | W. W. Spicer | Calhoun | February 8 |
| Madison | J. G. Bosley | Richmond | February 15 |

| COUNTY | SECRETARY | RESIDENCE | DATE 1932 |
|---|---|---|---|
| Marion | H. R. Wilbur | Lebanon | February 20 |
| Marshall | S. L. Henson | Benton | February 21 |
| Mason | Allen F. Murphy | Maysville | February 14 |
| Meade | A. A. Baxter | Brandenburg | February 22 |
| Menifee | E. T. Riley | Frenchburg | February — |
| Mercer | J. Tom Price | Harrodsburg | February 13 |
| Metcalfe | P. W. Bushoug, Acting Secretary | Edmonton | February — |
| Monroe | Geo. E. Bushoug | Tompkinsville | February — |
| Montgomery | D. H. Bush | Mt. Sterling | February 13 |
| Morgan | W. H. Wheeler | West Liberty | February — |
| Muhlenberg | Roy Orsburn | Greenville | February 28 |
| Nelson | R. H. Greenwell | Bardstown | February — |
| Nicholas | T. P. Scott | Carlisle | February 19 |
| Ohio | Oscar Allen | McHenry | February 7 |
| Oldham | S. J. Smock | LeGrange | February 6 |
| Owen | K. S. McBee | Owenton | February 1 |
| Owsley | D. E. Wilder | Booneville | February 5 |
| Pendleton | W. A. McKenney | Falmouth | February 14 |
| Perry | R. L. Collins | Hazard | February 12 |
| Pike | M. D. Flanary | Pikeville | February 5 |
| Powell | I. W. Johnson | Stanton | February 5 |
| Pulaski | W. R. Cundiff | Somerset | February 8 |
| Robertson | | | February 19 |
| Rockcastle | Lee Chestnut | Mount Vernon | February 8 |
| Rowan | G. C. Nickell | Morehead | February 27 |
| Russell | J. B. Scholl | Jabez | February 12 |
| Scott | F. W. Wilt | Georgetown | February 1 |
| Shelby | W. E. Morris | Shelbyville | February 15 |
| Simpson | N. C. Witt | Franklin | February 13 |
| Spencer | | | February — |
| Taylor | W. B. Atkinson | Campbellsville | February 8 |
| Todd | B. E. Boone, Jr. | Elkton | February 7 |
| Trigg | H. L. Wallace | Cadiz | February 28 |
| Trimble | | | |
| Union | D. C. Donan | Morgaufield | February 28 |
| Warren | Hal Neal | Bowling Green | February 14 |
| Washington | J. H. Hopper | Willisburg | February 21 |
| Wayne | R. E. Teague | Monticello | February 1 |
| Webster | C. M. Smith | Dixon | February 23 |
| Whitley | C. A. Moss | Williamsburg | February — |
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# KENTUCKY MEDICAL JOURNAL

BEING THE JOURNAL OF THE KENTUCKY STATE MEDICAL ASSOCIATION

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## THE PROGRAM FOR THE HARLAN MEETING

The President, Doctor C. C. Howard, has selected Doctor James H. Pritchett, of Louisville, to head the Committee on Scientific Work and to arrange the program for the Harlan meeting next fall.

Doctor Pritchett will appreciate suggestions from members of the Association as to the plans of the meeting. It is his desire to make the program responsive to the necessities of the profession. If you have anything in mind that will be of interest to the profession write to us. If any subject occurs to you that is of such general interest that it should appear on the program, suggest it to the Committee.

Our friends in Harlan are already making plans to insure the comfort and interest of all those who will visit their beautiful section. This will be a rare opportunity to see the mountains of Kentucky at their best. Harlan is one of the most beautiful and progressive towns in the Appalachian region and those from the Western and Central sections of the State will find as much interest there as our mountain friends found in Murray last year.

## FEDERAL MEDICAL RELIEF AND EMPLOYEES' COMPENSATION

We quote with approval the following editorial from the JOURNAL of the American Medical Association:

"Four million persons have been placed within the last few weeks under the coverage of the Federal Employees' Compensation Act. The mechanism of this new phase of governmental activity is described under Government Service in this issue of the JOURNAL. For every injury and occupational disease sustained in the performance of duty, all the four million are entitled to medical and hospital service at government expense. For disability or death resulting from such injuries and diseases, they or their surviving dependents are entitled to compensation. This army of employees has been hired to put to work, many of them in strange fields, without medical examination or approval. The possibilities of the situation, present and future, require the serious consideration of the medical profession. Under the cover of emergency activities the government is enabled to undertake actions that would not be assumed in less feverish times without extended hearings by all the elements of the population concerned. Physicians view with alarm this gradual transmutation of medical practice into a function of government bureaucracy. History indicates that measures introduced in an emergency tend to be perpetuated by the bureaucrats developed to make them effective during the emergency. The medical profession requires some assurance that these new invasions of medical practice by the government are to be truly emergency measures in the strictest sense of that term."

In each issue of the JOURNAL of the American Medical Association for the last ten weeks there have been not only editorials but news items on this important subject and we frankly do not see how any practicing physician can fail to be a member of this great parent organization critical times like this.

We realize the personal and individual difficulties that are confronting our doctors. We believe that the incomes of the individual practicing physician of Kentucky are less now than they have been at any time in this century. The whole situation is filled with danger for the future of the profession that we love. We are the only group in the United States that has not failed it, to a greater or less degree, in this emergency. It is only by combined and intelligent efforts that we are going to preserve the professional control by physicians themselves in the future. From every side special interests are sniping at the doctor. Everyone seems to be carping at and chiseling on him. We have but one defender before the great court of public opinion where we must win or lose our case. There was never a time when it was so important for every physician to be a member of his County and State Society and the American Medical Association. The JOURNAL of the American Medical Association is the greatest scientific periodical in the world. The information contained in its pages means the difference between penury and sufficiency to hundreds of physicians. The number of members of the American Medical Association in Kentucky should be trebled within the next thirty days.

We do not always agree with the leadership of our National Organization, but we cannot even intelligently disagree with them

unless we know what they are saying and doing. We are one of the component associations that make the American Medical Association. Our membership needs to know its policies and to help to make them. It is a great democratic organization and is entirely under the control of the physicians of the United States. Any uncorrected faults which it develops are our faults. Those in control of its policies are sincerely interested in the welfare of the physicians of this country. They are doing their best even as we are doing ours. Medicine, however, is too individualistic in these highly organized times to survive as an entity unless we too, are thoroughly and efficiently organized.

Let's join the American Medical Association as Fellows and help it to more completely represent the medical profession of these United States!

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## DOCTOR BEN BUTLER KEYS

Doctor Ben Butler Keys, of Murray, Kentucky, is dead. It is difficult to realize that this man who was so beloved and respected for his personal magnetism and abounding energy should not have remained longer with us.

Doctor Keys was born in 1880, at Alamo, in Calloway County. He graduated from the Medical Department of Vanderbilt University on May 1, 1908. He was the President of the Keys-Houston Clinic at Murray. He had been President of the Calloway County Medical Society, Southwestern Kentucky Medical Society, the Four-County Medical Society; was a member of the American Medical Association, Southern Medical Association, American College of Surgeons, Kentucky State Medical Association, and for several years has been one of the most useful members of the State Board of Health of Kentucky. He was interested in every civic movement that affected the State.

His death leaves a void in our lives but his engaging and useful life will always have a warm spot in our memories.

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## SCIENTIFIC EDITORIAL
## AMEBIASIS

The recent widespread publicity which has followed the outbreak of amebic infection in one of our larger cities, and the wide dissemination of the infection, has brought to the fore a disease entity which, to the mind of the average physician, has been thought to be one rarely encountered in this part of the world.

It is unfortunate that amebic dysentery should have become, to a large degree, a synonym for amebiasis or amebic infection. True it is that dysentery is a symptom of the most severe cases of infection with Endameba histolytica, but the vast majority of such infections are not accompanied by dysenteric symptoms but by much milder ones. The symptoms of these are not usually attributed to infections by Endameba histolytica, but usually to some indiscretion in diet.

Craig states that symptoms of amebic infection are largely confined to digestive and nervous symptoms. These are only brought out by close questioning and careful clinical survey extending back for months and years.

At this time it might be well to point out a few of the more salient features of this disease as encountered in this part of the world.

The disease may present most bizarre symptoms but a common syndrome is one in which the host gives a history of alternating diarrhea and constipation. The usual chief complaint being constipation. The patient usually states that he is troubled with slight constipation for a day or two at a time; he has a few severe, colicky pains in the lower abdomen, relieved by a diarrheal stool. As a rule only one or two diarrheal stools occur at the time of attack, but a slight diarrhea may presist for a day or two. This is followed by complete relief from pain and constipation for a longer or shorter period. The diarrhea is prone to occur late in the day or night and is generally preceded by a feeling of malaise, with slight headache and some distention of the abdomen. Lack of appetite and loss of weight may be observed. Fleeting, neuralgic pains in the lower abdomen, especially in the lower right quadrant, with tenderness to deep pressure are frequent complaints. Some patients show signs of nervous irritability. Neuralgic pains in back and legs; dulness and lack of interest in their work; lack of initiative; disturbed sleep; irritable pulse and excessive sweating of the palms of the hands and the soles of the feet.

In investigating any bowel dysfunction much time will usually be saved by employing the diagnostic aids in an orderly sequence, so that one will not interfere with the other. The proper order, for obvious reasons is, (1) Stool examinations, (2) sigmoidoscopic examination, and (3) roentgenoscopic examination by means of a barium enema.

Magath says: "There is no question that more protozoa will be found in fresh preparations following the taking of a good saline cathartic than in the examination of formed

stools. It is probable that if the patient takes a saline the number of stools necessary for examination can be reduced by half. In general, the more stools examined the more protozoa found, however, nearly all the infestations are diagnosed in the first two stools. If after the examination of three properly obtained stools, no protozoa are found, the chances of finding them are decidedly remote." It is very necessary that the stools be kept at approximate body temperature until they are examined, and the fresh specimens be examined on a warm stage.

Approximately half of the infestations present lesions visible through a sigmoidoscope and when present are typical The barium enema is of value more for its negativity than for diagnosing the infection. Hence, most value is placed on the stool examinations, which have to be done carefully and orderly.

The treatment of amebiasis has been, and is being, widely discussed. The toxicity of the appropriate drugs is well known. All should be used with due care and caution. Many preparations of arsenic are being used. The less toxic appear to be those of treparsol and carbarsone, one of their virtues being that both are eliminated rapidly. They both contain approximately 28% arsenic and are supplied in 0.25 Gm. doses. Emetine hydrochloride intramuscularly, combined with one of the arsenicals, is, I believe, the treatment of choice.

A "course" consists of 2-3 grain of emetine hydrochloride intramuscularly, twice daily for three days. At the same time giving treparsol 0.25 Gm. three times daily, the tablet to be chewed with meals for four days. This gives the patient 4 grains of emetine and 3 Gm. of treparsol to a "course". This dose is repeated, if necessary, at seven to ten days intervals.

If carbarsone is used in place of treparsol, it is given in doses of two 0.25 Gm. pulvules daily for ten days. An interval of a week to ten days should intervene before this is repeated.

The question of carriers is a major health problem, especially among food handlers. It is entirely possible, and very probable, that many so-called recurrences are in reality reinfestations. Those who have recurrences in their practice would do well to search for carriers among the food handlers, as amebic infections have a high multiple incidence in families and households.

W. J. Martin, Louisville.

## ORIGINAL ARTICLES

## PYLORIC STENOSIS, PLEA FOR EARLY DIAGNOSIS*

Gant Gaither, M. D.

Hopkinsville.

In non malignant pyloric stenosis, both congenital and acquired in the adult, the result of operative interference is so uniformly beneficial, that it is becoming in surgeons to advocate vigorously the early diagnosis and treatment by surgery of such cases.

During the last decade, marvelous progress has been made in handling congenital pyloric stenosis, the pediatricians now rapidly making the diagnosis and having their tiny patients given surgical treatment promptly. He would criticize himself very severely if he permitted the baby to continue vomiting until entirely emaciated and dehydrated beyond the chance of being relieved by operation.

The same happy status does not entirely exist in regard to non-malignant pyloric stenosis required in the adult. There are many reasons why he can not be so easily diagnosed and bought to surgical treatment. This paper is written to call attention to this class of patient in the hope that we may carry him in mind and have him submitted to surgery before the appearance of those late characteristic symptoms that mean more or less permanent morbidity.

It is not the scope or intent of this discussion to consider prevention of the occurrence of pylorie stenosis by caring for the prestenotic lesions in such fashion that the stenosis may not occur. We expect that in all cases where such lesions are discovered. It is to those dyspeptics who have already gone beyond the preventive stage that I would direct your attention and ask a more careful examination both physical and roentgenologic, as well as chemical, that an earlier diagnosis of pyloric stenosis may be made.

Many patients who have passed the ulcer stage and definitely are stenotic are still being carried on ulcer treatment, Sippy or modified, delayed by this suggestion or the other when already the cicatrization of the pylorous has reached a partial stenotic stage of such chronicity that only gastroenterostomy will relieve. Other such patients are not under the care of physicians at all, but are devotees to some religions cult or some food cult with attendant delay.

The earliest stomach surgery was done to relieve advanced pyloric stenosis just as the earlier surgery of the appendix was done after an abscess had already formed. The

*Delivered before the Kentucky State Medical Association, at Murray, September 11, 12, 13, 14, 1933.

results of gastroenterostomy were at once so spectacular as to challenge the admiration of surgeon and internist alike. It was but a step mentally from the operation to relieve stenosis to an attempt to relieve the cause of the stenosis by operating before the stenosis occurred, and gastroenterostomy was done for ulcer.

From these early beginnings we have seen gastric surgery swing quite far. It is not my desire to follow this thought further. It has gone so far that I believe we will prevent the occurrence of pyloric stenosis in the future. The next generation of surgeons see pyloric stenosis as rarely as they will see the very enormous ovarians cysts which we have removed, or the very large uterine fibroids which were formerly so common.

Granted therefore, that we are going to prevent the cases of the future, let us direct our attention now to finding and clearing up the cases of pyloric stenosis that are part of the present inheritance from gastric and duodenal lesions of the past ten years, not letting them go to the extent which has marked so many of them.

In our own series of cases there have been sixteen cases. This to many of you is quite small. But it represents the stenotic cases in a radius of forty miles of our hospital that have come to operation in the past ten years. How many exist yet to be cared for I do not know, but I am sure that there are a goodly number. The symptoms in the series had lasted on an average with these cases from five to seven years. They were nearly all late. Think of the economic waste of these years of invalidism which might have been prevented.

There were no deaths in the series. Some of the results were most pleasing, only one failure. Gain in weight, restoration to muscular tone and return to normal life was the history in nearly every case.

Retention of gastric content is the most uniform symptom and one for which relief is most ardently sought. Vomiting, frequently self induced is the final method of securing it by many, stomach lavage by others. The pressure of flatus in the stomach due to fermentation, causes pressure upon diaphragm with a train of related symptoms which the patient attributes to heart and respiratory system. This furnishes quite a field for the neurotic patient to roam in his history giving. The size of the stomach and its increase in total capacity is also quite constant.

The clinical picture is not always easy to recognize in the cases which have just passed from being ulcer cases to being definitely stenotic. When this occurs, certainly there should be no further question as to continued medical treatment. When the stenotic is well advanced, the symptoms pronounced, then diagnosis is rather easier.

We are asking in this paper that the internists who are treating gastric ulcer medically, have frequent check ups by roentgen examinations of their patients in the months following their dismissal as relieved rather than losing sight of them, thinking them cured possibly to find them later in other hands with pyloric stenosis after two or three years of ill health. Institute a follow up system which will instruct the patient to be on the look out for the advent of retention symptoms and ask his return should early ones appear.

In our new gastro-intestinal cases let us not consign to a try at medical treatment those in which we may infer that permanent though possibly mild retention is beginning to take place.

We can only secure this information by oft repeated x-ray examinations and gastric analyses. These will surely tell the story with exceeding accuracy.

The economic stress of today is such as to warrant us in scanning carefully all chronic crippling diseases which tend to produce in the body politic the invalid and non producer. The field of public medicine has been active and efficient in holding in check the tubercular disease, the occurrence of epidemics of typhoid, the spread of contagions.

As surgeons and internists, we may well do our part in this same effort, though in a much modified extent, by more promptly caring for the chronic dyspeptic with stenosis either has or will become incapacitated for active competion for own livelihood.

**DISCUSSION**

**W. M. Martin, Harlan:** In twenty years' practice I have had only two cases, and it happens that I was called in consultation in both of those cases and it was very easy to make a diagnosis. I advised an operation, these babies were operated, and I have life-long friends out of those two mothers, I am sure.

I do think that there is no doubt about the trouble being remedied at once if you get an early diagnosis.

**W. H. Mason, Murray:** We have had quite a little experience in the William Mason Memorial Hospital with pyloric stenosis, but there is one case in particular which shows what wonderful results can be obtained in cases that look absolutely hopeless. I had a baby brought to me six weeks old. At its birth it weighed eight pounds. It had been vomiting, keeping practically none of its food, only a very little liquids of any kind. An x-ray examination showed only a very small amount of fluid going through the pylorus. We found that there was a stenosis, and at this time the baby weighed five pounds. We immediately opened up the abdomen, did a gastroenterostomy, the baby had no shock, practically no

symptoms, as those who have operated on these little folks are very often surprised to find, and when the baby left the hospital in three weeks it weighed ten pounds. He is now a big boy ten or twelve years old, absolutely normal in every way.

**D. L. Jones,** Fulton: I am in general practice of medicine. I had a youngster about five years ago, who for about ten days was regurgitating food with a very sudden onset. I made a clinical diagnosis of pyloric stenosis, and was confirmed by x-ray, and was operated on at a Paducah hospital. After getting it in the hospital a pediatrician and surgeon decided they would see if they couldn't get food to go through its stomach, although we had already made x-rays and found that barium would not go through. After keeping it under observation for three or four days, it was operated on. On operating the stomach was full, the surgeon grasped the stomach in his hand and tried to force food through the pylorus which he couldn't do.

The pylorus was hard like cartilage or gristle when it was cut down on for the operation.

The youngster recovered and has had no trouble since that time.

**C. F. Long,** Elizabethtown: I wonder if any of the doctors have tried using atropine sulphate in cases that they thought were pyloric stenosis and later found they didn't have to have an operation after using that. I had one case brought to me that was about three months old that had been seen by three or four doctors, and they had tried it on every milk from Eagle Brand to Mellin's Food and it would vomit after each feeding. I had a clue from what they told me the other doctors had done and how it had acted. I gave them a prescription for one-half grain of atropine sulphate to an ounce of water and instructed the mother to give one drop of that about fifteen minutes, before each nursing, and it could be increased up to three drops, but she never had to use but one drop before each nursing. She kept it on that for around two months, and since that time the baby has been able to take its nourishment normally and is today fat and healthy.

We left that off after we saw it was being relieved and it still vomited, but after keeping on for about two months the baby became perfectly relieved and has been so for over a year and is normal and healthy in every way.

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**Turpentine Treatment in Gynecology.**—Probstner was disappointed with the results of intramuscular injection of turpentine (Klingmuller) in the 270 patients with acute or chronic inflammation of the adnexa, parametritis or perimetritis, in whom he tried the treatment.

## GONORRHOEAL INFECTIONS OF THE FEMALE*

E. Dargan Smith, M. D.

Owensboro.

Evidence of gonorrheal infection may be found on the vulva, in the vulvo-vaginal and para-urethral glands, in the vagina and the endocervix, occasionally in the endometrium, often in and about the oviducts where its greatest havoc is wrought, and the ovaries may be involved together with a pelvic peritonitis, and rarely there is a peritoneal infection of a more diffuse nature. The entire urinary tract from the meatus to the kidneys is likewise subject to invasion by the gonococcus, and there are extra-urogenital lesions as ophthalmia, proctitis, arthritis, and infrequent instances of septicemia which are outside the scope of this paper. We shall leave the domain of the urologist to him and follow the trial of the gonococcus through the genital tract.

The handling of involvements of the external genitalia are almost without exception office procedures, and so standardized as to scarcely merit discussion. Condyloma of the mucus membrane respond to caustics, while similar growths on the skin area require dessication. Abscesses of the glands must be drained, but the more chronic cystic conditions of these areas demand complete ablation of all the diseased tissue to effect a cure.

Endocervicitis calls for more than passing notice. The acute stage should be treated as a part of a rather generalized infection of the utero-genital tract. A chronic endocervical infection with occluded glands and extensive erosions is a menace to the uterus, ranks as the chief cause of sterility in women, and is a prodrome of cervical cancer. Palliative treatment of extensive erosions is frequently more harmful, by aiding the upward spread of infection, than it is beneficial. To sustain this condition that injudicious local treatment and instrumentation of the cervix accounts for most of the extensions of infection to the oviducts Polak states, "When left to themselves not more than ten per cent of acute gonorrheal infections of the cervix extend above the internal os." Cauterization in chronic endocervicitis is usually followed by attractive healing as viewed through the speculum, but it may cause disconcerting hemorrhage, and most certainly it can not be expected to destroy all the infected glandular tissue within the cervix, and so long as infected tissue remains within the cervix it continues to be potentially dangerous. The

*Read before the Kentucky State Medical Association, at Murray, September 11, 12, 13, 14, 1933.

effective treatment is conization by the method of Sturmdorf. Conization of the entire endocervix is one of the most satisfactory operations of all surgery, for by this relatively simple procedure the leucorrhoea is stopped, the probability of conception increased, the muscles of the cervix are left in a condition which permits ready dilatation during subsequent labor, the threat of extension of infection to the uterus is removed, and the development of subsequent carcinoma is effectively eliminated. Every woman with chronic endocervicitis presents an indication for conization, yet the procedure is not done with anything like the frequency its benefits justify.

The uterus, during the intermenstrual period, blocks the spread of infection from the cervix to the oviducts, and the periodic regeneration of endometrium usually permits the uterus to remain free of chronic infection. This barrier function of the uterus explains why even years may pass after the primary infection before a salpingitis develops.

Gonorrhoeal inflammation of the oviducts always begins as an endosalpingitis, but the infection rapidly invades the muscular and serous coats and excites a contiguous peritonitis, with a profuse fibrinous exudate which tends to limit the spread of infection and to be followed by permanent, cobweb adhesions after the activity of the organism ceases. The duration of this inflammatory process is always uncertain, for awhile over seventy-five per cent of all pelvic infections have a gonorrhoeal origin we are not necessarily dealing with a self limited disease for if a bacillus coli infection becomes engrafted, as it frequently does on account of intestinal loops entering into the inflammatory mass, the oviduct becomes distended with pus forming a pyosalpinx. In time the bacillus coli also dies, as did the gonococcus, and the contained pus while foul smelling becomes sterile. However with a streptococcic contamination operation is always serious and may excite a fatal peritonitis. Therefore an intelligent appreciation of the life history of the infecting organism and the pathology which it produces is essential if the proper method of treatment is to be chosen. So long as the primary or associated pathogenic organisms remain active the process must be treated as an acute infection.

In the acute stage of pelvic infection, the most favorable results follow absolute bed rest, sedatives, bowel hygiene, and vaginal irrigations with an alkaline solution at 120 degrees. A better, perhaps the best, method of application of heat is that advised by Dr. Charles Robert, Elliott, namely, a distensible vaginal bag through which water is introduced and maintained at any desired temperature and pressure. By this method the temperature of the fluid may be raised three fourths of a degree per minute until a temperature of 130 degrees is reached. By this treatment, the pathological exudate is absorbed, mobility of the uterus increased, tenderness decreases, tubo-ovarian masses become smaller, there is an average leucocytes increase of over seventeen per cent, and most cases become clinically cured. An Elliott machine in every hospital would tremendously improve the effectiveness of our treatment of pelvic inflammations. Certainly operative intervention, by the abdominal route, is definitely contraindicated in acute pelvic cases, but, in the lesser number of instances in which local treatmenet is not followed by restoration to a practically physiological state it is essential.

The oviducts—the process is usually bilateral—when distended with pus usually sink into the cul de sac of Douglas. Leakage frequently occurs, the omentum and sigmoid become plastered down limiting the process to the pelvis, and not infrequently an abscess develops. Such abscesses should be treated by posterior colpotomy. Vaginal section is admittedly palliative, but it permits of rapid improvement, as evidenced by the leucocyte count and polymorphonuclear percentage, and prepares the patient for a safe radical operation at a later date.

Two particular dangers threaten in operating on infected oviducts; first, spread of sepsis, and second, injury to the bowel. These may be minimized by a thorough packing off of the abdominal cavity and by peeling the infected tubal mass from the bowel but never the intestines from the tubal mass. Every philatelist understands the principle of this, for he peels the tough envelope from the thin stamp and invariably marrs the cover and leaves his precious stamp intact.

When conditions are encountered which call for bilateral salpingo-oophorectomy the best interests of the patient are conserved by doing a pan-hysterectomy. Removal of the cervix stops the nuisance of a leucorrhoea, and eliminates the threat of malignant degeneration. Such comforts and safeguards to the patient fully justify the added trouble of doing a complete hysterectomy rather than a supracervical amputation of the uterus. The possibility of hysterectomy indication should lead to the routine preoperative preparation of the vagina as well as the abdominal wall.

When an oviduct is removed considerable care, and knowledge of blood supply, is needed to avoid strangulation of the ovarian blood supply, and carelessness in this matter is inexcusable, and particularly so if the other ovary must be sacrificed. It is probably best

to resect an ovarian cyst when at all possible, for while the ultimate fate of a conserved portion of an ovary is somewhat in doubt, yet nothing is lost and there is a possibility of permanent gain. When faced by bilateral cystic ovaries, in a young woman, rather lasting relief can be secured by puncture of the individual cystic areas with the electro-cautery. How permanent this benefit may be I do not know, but I avoid bilateral oophorectomy as I would the plague. Except in women near the menopause these unsexed creatures become pitiful psychoneurotics.

When extensive dissection is necessary in the removal of infected pelvic structures, rather profuse serous effusion may be expected, with dissemination of potentially purulent material. In such situations ample drainage must be provided, for neglect of this precaution results in a stormy convalescence, adhesions, a varying degree of peritonitis, possibly a subsequent intestinal obstruction, and always some permanent morbidity. It is increasingly my practice to use the vaginal outlet for drainage since it is most effective and direct, eliminates contamination of intestinal loops by an anterior abdominal drain, and permits complete clean closure of the abdominal wound. When drainage is indicated, and it seems inadvisable to drain through the vagina, drainage is best provided for by a stab incision a couple of inches away from the operative wound, as this permits complete closure with primary healing of the main incision thereby affording additional security against rupture of the abdominal wound or subsequent incisional hernia.

The decision as to the best method of handling a given case of pelvic infection often calls for the exercise of fine judgment. The problem involves a decision as to the variety of bacteria which have entered into the infection, a knowledge of their virulence at different stages of the process, and an appreciation of what may be expected from various therapeutic measures. Few situations promise more gratifying results in return for appropriate action, or impose as relentless a penalty for error. It is apparent the informed and experienced surgeon develops increasingly improved judgment as to how a given case should be conducted, and it is desirable the patient should be given the full benfit of this specialized knowledge. Unfortunately this ideal is not always attained, and perhaps the chief cause of failure is the careless practice of referring patients "for operation" rather than "for a surgical consultation." If the surgeon receives a patient for his opinion he is unrestricted in his decision as to how her best interests should be served. Occasionally the consciencious surgeon may offend the attending physician by suggesting preliminary preparation, or even advising against the performance of an operation which the patient's family has been told was urgently needed. The less principled, or more ignorant, operator is not particularly troubled by these inhibitions of conscience, and works on the policy that the referring physicians approval, and the patient's consent call for immediate action. Although he may be mistaken, the practitioner is honest and sincere in his opinion so it is natural that he should be offended and embarrassed at having his decision reversed, and as a result his inclination, in the future, is to prefer the operator who agreeably approves of everthing which has been told the patient. Obviously such unwholesome practice is detrimental to the interests of the patient and hinders the development of good surgery, so it is fundamentally unethicel and immoral. The practicioner lives too close to the Golden Rule to willingly work an injustice on his patients, and the solution rests on an appeal to his moral sense and intelligence, and it is simply this; a patient should be referred for a surgical opinion and not "for operation."

## DISCUSSION

**W. H. Mason,** Murray: I rise to express my great appreciation of this paper because it brings to us a subject that not only the surgeon but every man who practices medicine has to meet. The Doctor's paper was splendidly written and covered the point exactly.

**W. B. Atkinson,** Campbellsville: There was one entirely new thought in this paper that came out that is very important. It is that you can get your gonorrheal infection in women and you do not have extension into the oviducts until years afterwards. That may be an old story to most of you, but it is not to me.

We find that the majority of these young girls who are infected with gonorrhea know what they have. So many of the married ones who have got infected after marriage do not know it, and we find that the complications often are that there will be a hasty marriage, there will be an infection, there will follow a divorce, and so often there will be a re-marriage of the woman with the complications that Dr. Smith has outlined, and there is a particular danger in criminal abortions after this type of infection.

This was one of the most practical papers that we had on the whole program. I haven't heard all of them, of course.

**J. Ernest Fox,** Lexington: I just want to endorse one thing that Dr. Smith said in his plea for a more conservative surgery. We who treat nervous and mental cases see so many of these young women who have had a premature menopause develop a psychosis or psycho-

neurosis and are left in a worse condition than their original condition was before they were operated.

## CRYPTORCHISM WITH INCIDENTAL CARCINOMA*

J. Andrew Bowen, M. D.

Louisville.

O. S. case No. 13870, colored, male age 43, entered the hospital on the Urological Service January 4, 1932 with acute retention. The onset of his present illness began almost three weeks before admission with frequency, nocturia, urgency and burning upon urination. The day before admission urination became impossible; superpubic pain began with dribbling.

Past History: General health has always been fair. No severe illnesses. He has had hemorrhoids for some time with a hemorrhoidectomy at Louisville City Hospital about two weeks before the present illness. He has had urethritis a number of times with the last acute attack about two years ago. His discharge has been slight during the past two weeks with a definitely cloudy urine, the history of other systems is unimportant.

Physical Examination: Patient is a well developed, fairly well nourished adult male negro apparently in distress.

Head, eyes, ears, nose, mouth and neck are negative with the exception of dental caries and pyorrhea alveolarus.

Chest: Fairly well developed. Movements fair and equal. There is a small wen under the left arm. Lungs are clear throughout. Heart is normal in size and position. Blood pressure is 165 over 110.

Abdomen: Negative except for dullness in the lower quadrant extending upward to a point about midway between the pubic arch and the umbilicus. This area is tender.

Genatalia: Normal except for slight urethral discharge and undescended left testicle which may be felt in the canal.

Rectal: Unhealed hemorrhoidectomy wound. Prostate slightly enlarged, soft and tender.

Extremities: Normal with normal deep reflexes.

Laboratory Findings

Urine: Albumin, four plus, cloudy, acid and loaded with pus. An intravenous phenolsulphophthalein with specimens collected at fifteen minute intervals returned 25, 20, 15 and 5 per cent.

Blood: White blood cells 9,300 with 79 per cent polymorphonuclears, 20 per cent lymphocytes and 1 per cent eosinophiles. Wassermann reaction negative.

Spinal Fluids: Cell count 4, globulin negative, colloided gold and Wasserman reaction negative.

Hospital Course: Patient was placed in a retention catheter with continuous drainage and urological routine. On January 16 a cystoscopic examination was done which showed a diverticulum of the right wall of the bladder. A cystogram was done at this time and reported as a diverticulum of the right wall about one-fifth the size of the bladder. On March 5th, under gas oxygen, the bladder was opened suprapubically, freed downward along the right side and the diverticulum approached from behind. It could not be entirely freed. The opening into the bladder was enlarged, the mucosa entirely stripped from within the diverticulum, the opening into the bladder closed, and the sac opened and drained from behind. A large Pezzer catheter was left in the bladder and the wound closed in the usual fashion, bringing the catheter and drain outward through the wound.

The patient had an uneventful convalescence and cystogram made on May 16th showed a roughened outline to the bladder, but the absence of the diverticulum.

On April 4th under spinal anesthesia the mass in the left inguinal canal was exposed, freed, the cord cut between clamps, the mass removed and the cord sutured to the fascia, and the wound closed together in layers. The patient made an uneventful recovery from this procedure.

Pathological Report: The specimen consists of a testis, epididymus and membranes. Weight 28 grams. Testis soft and grayish white. Epididymus gray. Membranes soft and red tinged. There is a firm rounded mass at the beginning of the vas measuring three quarters of a centimeter in diameter.

Microscopic Appearance: Sections of testis and epididymus. The testicular substance is atrophic so that parenchymal cells are degenerating and stroma fibrosed and hyalinated. Spermatogenesis not seen. Blood vessels are thickened. Adjacent to the gland and extending out into what appears to be the gubernaculum there is a diffuse growth of adenomatous tissue made up of well formed acini, lined with low columnae epithelium. The cells are quite regular, well formed, and show no mitoses. Some are arranged in long cords of cells. The basement membrane is not well formed, but there is not much evidence of invasion. In places the stroma is abundant and dense; in others only small in amount and delicate, consisting of connective tissue. The tumor is believed to be of low grade malignancy, possibly derived from the epididymus rather than the testis,

*Read before the Jefferson County Medical Society.

although this may be modified by further study.

This case is of importance for two reasons. First because it shows that testicles not in their proper position do not develop proper function, and second that such atrophic glands tend toward malignant degeneration. Experience has shown that most undescended testicles may readily be brought down into their proper places and develop normally thereafter if done before the age of puberty. This operation is done preferably between the fifth and tenth year. If they are neglected beyond the age of puberty then removal had best be done under most circumstances. Testicular malignancies make up about 5 per cent of the malignancies occurring in man, and approximately 10 per cent of these are found in the undescended gland. They are rapidly growing, fairly early metastisizing tumors, either by way of the lymph or blood channels. They usually spread first to the retroperitoneal lymph glands about the origin of the iliacs, and then to those about the kidney pedicle. They then reach the mediastinum and lungs. If they spread by the blood stream, the lung is, of course, involved earlier.

Due to the early stage of the growth under discussion and its apparent complete removal, deep x-ray therapy may not have been necessary but the patient has had three such treatments since his discharge from the house on May 18th. He has gained about 25 pounds and, except for slight urgency, has no symptoms and feels that he is in good condition.

**DISCUSSION**

**Owsley Grant:** There are a number of factors that make the case particularly difficult of prognosis. The first is that malignant tumors of the testicle as well as the more rare tumors of the epididymus, as this appears to have been, do not offer, as a rule, a very favorable prognosis. To such an extent was this true that for a long time wide dissection, including removal of the deep glands, was advised in these cases but now the concensus of urological opinion is that the best method of treatment of carcinoma of the testicle is by simply removing the infiltrated glands and subsequent by using deep therapy.

Does undescended testicle offer more resistance to malignancy than does a descended testicle? Approximately 25 percent of carcinomata of the testes occur in the undescended group. Some very beautiful work was done along this line by Moore, three or four years ago, by which he demonstrated the relationship between undescended testicle and spermatogenesis. He showed very definitely, in certain types of sheep on which he experimented, that when a normally functioning testicle was put into the inguinal canal and allowed to remain there over a period of several months, it lost is spermatogenetic function, but when again placed in the scrotum of the same animal, the spermatogenetic power was regained. He also showed that the application of heat to the testicle very definitely interfered with the spermatogenetic function.

**M. Casper:** There is an old newspaper axiom to the effect that when a dog bites a man it is not news but when a man bites a dog it is news. By the same token, removal of a testicle from a man is a not uncommon occurrence, but I want to mention in a few words a case in which I removed a testicle from a woman. This woman had a small inguinal tumor which had existed for a long time and she did not know what it was. Finally she married and the tumor began to hurt her and she wanted it removed. I removed it and sent it to a pathologist who reported, that he could make nothing of it except testicular tissue. The tumor was located right at the external inguinal canal, just where we would look for an undescended testicle in a man.

## ERYSIPELAS: WITH REPORT OF RECURRENT CASE*

Morris J. Flexner, M. D.

Louisville.

"A sportsman injured his right foot with his gun. The wound, in itself serious was rendered more so by consecutive hemorrhage, and became complicated with erysipelas on the 15th day. The disease involved the entire limb, gangrenous patches appeared and prostration supervened which led to death on the 20th day from the accident. The brother, a healthy young man, who had ministered to deceased during his fatal illness, was seized, without any local cause, with spontaneous erysipelas of the face which extended to the scalp, and became complicated with prostrating symptoms. He died on the 8th day. The sportsman's daughter, a child of three, had a slight burn on the hand which became the seat of erysipelas. The disease extended to the arm and chest, the symptoms at the same time assuming a formidable character; ultimately the extent of the disease limited and the child recovered. The family laundress, after washing the linen of the household, was seized with phlegmonous inflammation of the hand, from which she recovered. The sick nurse had erysipelas of the head and face and recovered. A Sister of Charity, who had been entrusted with the irrigation of the foot of the wounded sportsman, developed a large phlegmonous abscess of the arm followed by others elsewhere, sloughs developed and she succumbed. The religious community to which she belonged was in excellent health

*Read before the Medico-Chirurgical Society, Louisville,

when she returned to it. However after her return different prostrating maladies of more or less severe character showed themselves. Health was restored to the community by the Sisters evacuating the convent and going to the country. Before that, nine Sisters who had dressed the abscesses of the diseased, had severe illnesses from which two died."

The above is a quotation from the translation of Trousseau's Lectures in Clinical Medicine published in France in 1868, Trousseau quoting from a paper of Dr. Pujos of Bordeaux, written in 1866. It gives an excellent picture of the ramifications of the disease once it developed with its etiology not being understood. Trousseau quoting his own experiences reports only one death in 57 cases, a good mortality for 1933, so he concludes the disease is benign and says the cases he has seen die have done so because of the treatment rather than from the disease. But the story of fifteen cases of erysipelas developing after one gun shot wound, with five deaths, emphasizes how far we have come since the days of that great French clinician, 64 years ago.

The story of the etiology and the development of modern treatment of the disease is one of the fascinating stories of medicine which has attracted most of the great writers and clinicians from Hippocrates down to the present date. It was in 1868 that Vulpian first described the histopathology accurately, and in 1870 that Nepveu described the presence of micrococci in the erysipelatous lesions and blood of such patients. Orth in 1873 found "micrococci in chain formation in the contents of the bullae." However much controversy still existed concerning the bacterial cause of the disease and Birkhaug, who has written an excellent article on the subject, wonders that minds of the capacity of Ehrlich and Billroth should have discountenanced the facts at hand.

In 1881 Fehleisen first isolated the organism and fulfilled Koch's postulates, reproducing the disease in rabbits. From that time until 1919, when Dochez, Avery and Lancefield began to investigate streptococci by means of agglutination, absorption and animal protection, dividing hemolytic streptococci into four biological types, little or no progress occurred. Following this came the notable contribution from Tunnicliff, Dochez and the Dicks, the scarlet fever muddle being largely cleared up by the work of this group. Birkhaug in 1924 dealing with streptococci from erysipelas cases showed that 90 per cent constituted a highly specific type, differentiated from the scarlet fever streptococcus and other heterogenous strains. In 1925 a toxine from the streptococcus was shown by Birkhaug to react intradermally in a manner similar to the Schick and Dick tests and at the same time he demonstrated antitoxin in patient's blood. Then he produced an antitoxin from a donkey and a horse which was used first in the treatment of the disease. To date this has been tried in thousands of cases, the results of which will be reviewed critically later on. In 1927, he took up the study of recurrent erysipelas. While an attack of scarlet fever usually confers permanent immunity an attack of erysipelas predisposes to recurrence of the attack. In one study of 342 cases the disease returned in 25 instances or 7.3 per cent, these being in moderately severe cases. He found that immunity developed about the 10th day as shown by negative skin test and the disappearance of toxin from the patient's blood serum, and urine, but that in some patients it disappeared as early as six weeks after recovery as shown by the intradermal reaction to 10 skin test doses. He attempted to permanently immunize these people by injecting increasing doses of carefully prepared toxine, showing that often the recurrent attack occurred at the time the skin test again became positive. In a series of 24 cases published at that time, 9 had gone two years, 7 for one year and 8 for six months with no recurrence. All of these had been having attacks from six weeks to four months before this treatment.

There are a few clinical facts which I feel should be stressed at this point. While the general impression prevails that the disease must follow an abrasion, the point of entrance cannot frequently be found. This applies particularly to cases about the feet associated with ring worm or lesions of the face coming from infections in the nose or sinuses. It is still fairly common in our public institutions where crowding of the aged is associated with poorly balanced diets. Lesions on the face occur in 90 per cent of the cases, on the leg in 8 per cent, with 2 per cent generally distributed.

In attempting to secure the organisms one must know that they are situated at the periphery of the lesion, seldom in the center, in the lymphatics exclusively, and rarely in the blebs.

The disease is frequently ushered in by a chill followed by high fever, the eruption at times not being visible for 24 hours. Associated with this is great malaise, headache with nausea and vomiting at times. The appearance of the skin, red, elevated, with an advancing ridge, is characteristic, once seen, easily recognized. It has a peculiar firm rubbery feel and local heat. Blebs are not constant but may occur. The fatal cases occur, as a rule, in the aged and infants in whom may appear all of the complications of

a hemolytic streptococcus septicaemia with a fatal pneumonia or pancarditis terminating the picture. In young healthy adults the death rate is usually about 1 per cent; in the aged and infants much higher. In the first month of life, according to Foote, the mortality may reach 95 per cent.

It cannot be stated too often that surgeons and obstetricians should not attend cases of erysipelas. The teaching of Oliver Wendell Holmes and Semmelweiss concerning this and similar conditions must ever be kept before us.

McGlasson in 1926 and Amoss again in 1931 have called attention to the association of ring worm infections of the toes and nails in recurring erysipelas of the feet and legs. When on the face, chronic sinus disease is suspected. Amoss tests the patient for streptallergin sensitivity by using a number of stock filtrates and immunizes with the one that reacts. At the same time he directs a campaign against the fungus infection, to be described later on, believing that this paves the way for the entrance of the streptococci. His results are quite remarkable, reporting at that time twenty-three cases with no recurrence, the longest having gone 3½ years.

Much has been written on the therapy of this disease. For years each dermatologist had his pet salve or lotion, most of which are of very questionable value. As to the value of the antitoxin there is still some dispute although the work of Symmers and Lewis from Bellevue Hospital recently reporting on the treatment of 3,311 patients must be given due consideration. This observation extends over a period of five years, long enough so that the former criticism directed against them that possibly their good results were due to a mild agent, can now be disregarded. They injected 10 c. c. of antitoxin intramuscularly and repeated every 12 to 24 hours if necessary, up to 6 doses, the treatment for children and adults being the same. They emphasize the importance of early administration and noted that facial erysipelas responded much more readily. From 1904 to 1926 there were 15,277 cases of erysipelas at Bellevue without antitoxin with 1,543 deaths, or mortality of 10.1 per cent. In the last five years 3,311 cases with 237 deaths or 7.1 per cent mortality rate, a reduction of 3 per cent. However the reduction in the duration of the disease was striking, approximately 60 per cent in the cases treated by antitoxin. They found that 5 out of every 100 cases showed no response to antitoxin and explain it by assuming that this particular strain was not represented in the immunizing group used to produce the serum, similiar in this respect to the meningitis situation.

R. Cannon Eley in 1930 reported favorably the use of antitoxin in a series of 33 infants where the mortality is usually very high. When used early there was a marked reduction in mortality and great clinical improvement, the mortality in the early administration of serum varying from 5 to 68 per cent.

X-ray and Ultraviolet light have both been used extensively. Widman, August, 1932, compared 97 cases treated by ¼ skin dose on 3 successive days with 97 cases receiving "general medical care." He did not state whether the latter received antitoxin or not. With x-ray the average duration was 5 days as contrasted with 10 days in the other group and the temperature returned to normal in about one-half the time.

Davidson, the British Medical Journal, May, 1932, reports extremely favorably on the use of ultraviolet light in 51 cases of erysipelas ranging in age from seven months to seventy-four years. One and one-half to two times the erythema doses was employed. Each case was controlled by another case treated medically, (apparently antitoxin was not used). The cases treated by light only were greatly improved in 48 hours, occasionally in 24. 4 cases died. Those that recovered did so about twice as fast as the control cases.

Walter Ude, roentgenologist to the Minneapolis General Hospital in June, 1931 made a comparative study of the therapy of 472 cases. Six methods of therapy were used: I. Mag. Sulp and Glycerin packs; II. Roentgen radiation; III. Ultraviolet radiation; IV. Antitoxin; V. Roentgen radiation and antitoxin; VI. Ultraviolet radiation and antitoxin. From his statistics he concluded that Ultra-violet ray therapy is the method of choice. In a previous report he noted a clinical arrest of the disease in 92 per cent of the cases.

There is one therapeutic measure that I have seen turn the tide in erysipelas, not emphasized in any of these reports, and that is transfusion. Here, as in other streptococcus infection where the battle is a close one, a timely transfusion may decide the difference between a favorable and a fatal outcome. This is again particularly true in infants and old people.

To recapitulate and state my own views I believe the average case should:

1. Be treated by antitoxin early and, if not benefitted, a 12 hour injection continued for six days.

II. If available, Ultraviolet light is the 2nd choice.

III. Roentgen ray, third choice.

IV. Any local application to relieve the conscience of the physician. I confess to having painted the advancing ridge with 10 per cent Mercurochrome and having swathed faces and legs in Ichthyol Ointment. The latter has great concealing properties.

V. General nursing care is important, this includes fluid intake and output, proper diet, elimination, antipyretics, sedatives, etc.

VI. Transfusion in the very ill.

VII. In cases of recurrent lesions of the feet or legs I subscribe whole-heartedly to Amoss' regime.

VIII. Mild cases will recover with proper hygiene, nursing and little else, as per Trousseau's statistics.

I wish to report the following case of recurrent erysipelas.

### Case Report

Patient, female aged 42, an executive in an active organization; first seen in January, 1928 complaining of swollen, painful left ankle. The swelling had been present off and on for six months, gotten worse in the past week. Her family history was of no interest. In her past history the striking fact that a few years previously she had had an acute arthritis of the right knee which had incapacitated her for a few days. At the age of nine she had an ankylosis of the right jaw following an osteomyelitis, secondary to an infected tooth. A false joint was made by Drs. Horace Grant and Frank Rounds which though somewhat limited in motion has been quite successful.

On physical examination her temperature was 99°, pulse 80, blood pressure 156/104, weight 170 lbs. height 66″, she being 26 pounds over her computed weight. She was decidedly of the obese type, tissues flabby. Both legs were quite large, ankles big. The left was definitely swollen and tender, not red, no local heat, with a thickened bursa over outer side, no pitting edema. There were several suspicious teeth present including a few peg teeth. Definite limitation in movement of jaw, with 2 scars and quite a deformity at site of operation. Both knees showed grating on motion. X-ray of the teeth showed four abscessed, which were removed by Dr. A. P. Williams. Following this and the placing of the patient on a definite arthritic regime there was decided improvement in the course of two weeks. The blood pressure two months later had fallen to 133/100.

The initial attack of erysipelas occurred the first of August, 1928, five months later. It was first noticed about the toes of the left foot, the great and third toe being more involved. There was a chill followed by a temperature that reached between 103° and 104°. The process spread rapidly up the leg, reaching the knee on third day, the upper part of the thigh two days later. The lesion was not continuous but consisted of large thickened dark red islands of infected skin, coalescing in places to take in areas six to ten inches square. Bullous vesiculation occurred on the 3rd or 4th day. 10 c c of antitoxin was given the 1st day after testing for sensitivity to horse serum and repeated the 3rd day. The lesions were covered with an ointment containing ichthyol and zinc oxide and wrapped in old linen. The advancing edge was painted with 10 per cent solution of Mercurochrome each day. The patient was quite miserable and obtained only slight comfort from any medication, antipyretics probably affording most relief for the headache which was present. Fluids were forced and a daily saline purge given for the first few days. The process began to wane about the 4th or 5th day but it was between 8 and 10 days before it had subsided entirely and two weeks before she could be up and about. Certainly no very marked therapeutic result was obtained from the serum in this attack.

On the 26 of March, 1929 about 7 months after the first attack a second one occurred in the same locality, starting with the foot and progressing up the leg. The clinical picture was as at the first attack only less severe. There was chill, high temperature and general malaise. One injection of antitoxin was given on the 2nd day after the usual precautions. The general treatment was essentially the same as at the first attack. This was of shorter duration and not so severe. One month later I made the first attempt to immunize her against further trouble by giving her a course of stock streptococcus erysipelas vaccine. Three months later the 3rd attack occurred—definite but quite light—lasting a very few days. Because of the lessening of the severity of the attack I was encouraged and decided to repeat another course of vaccine. About this time the patient decided to undergo some reduction of weight. This was done by diet, exercise and very small doses of thyroid. By December 1929 she had reduced to 156 lbs. and felt quite well.

The fourth attack occurred on February 21st, 1931. The first red spot was seen on top of the foot a few inches from the base of the toe whence it spread in both directions. It was quite mild and cleared up in 72 hours. Because of the fact that this foot was quite flat and circulation only fair. I began to wonder whether that played a role. She was given definite exercises to help both these factors as well as tincture of Metaphen to apply twice a day about all the nails.

Two months later on April 16th, the 5th. attack occurred, also mild with a spotty eruption up leg. Chill and fever lasted only one day and the whole process cleared up

quickly. The 6th attack was on July 4th, 1931 and lasted 4 days. The eruption was thought to have begun about the ankle, the great toe was not involved at all.

About this time both the patient and I were getting a little exasperated with this disease so I had Doctor Robert Kelly see her from the standpoint of her epidermophytosis, having heard Amoss read his paper in March at Baltimore. Doctor Kelly felt there was some ring worm present not extensive but definite and treated her with salves, X-ray, etc. and the condition improved. In spite of all this the 7th attack occurred on the 3rd of October 1931. It was short but stormy, with chill, high temperature, rapidly spreading eruption, but had burned itself out in three days. I wrote Doctor Amoss for suggestions but found him in China for six months so looked elsewhere for help. As I had used Squibb's antitoxin I wrote to Dr. John F. Anderson requesting that he send me either vaccines or toxine to try and immunize this patient. He kindly sent me dilutions of toxine of 500 skin test doses to the c. c. to begin with o. 1 c. c., then 1 c. c., then 5 c. c. to repeat the last dose three times. All were to be given intramuscularly at 7 to 14 days interval. The last injection was given December 8, 1931.

On April 4th, 1932 she had the 8th attack. Fortunately this time she was off on a business trip in Buffalo when she wired me and I at once sent her word to go immediately to Rochester and place herself in Dr. K. Birkhaug's care. It seemed there was an element of good luck in this attack and I felt that we were placing her about in the court of last resort. He wrote me describing the attack as a mild recurrent erysipelas, saying that he had procured a culture by injecting a small amount of saline into the edge of the inflamed area, re-aspirating and then pouring into moulten blood agar. He isolated several colonies of a strongly hemolytic and toxigenic streptococcus Erysipelatis. He tested the patient with 0. 1 c. c. of (1st) 1:100 dilution toxin: (2nd) 1:100,000 dilution heat killed S. Erysipelatis (about 1000 organisms and (3rd) 1:1000 dilution combination of toxin and vaccine. In 24 hours she reacted violently to all three so he decided she should be immunized both against the organism and its toxin and sent me 10 c. c. of such a combination. The injections were to be given intradermally in increasing doses, giving 6 doses in all. The local reactions were quite severe and because of this I divided the last dose and gave it in two places, on May the 19th. On May the 22nd another attack occurred, being No. 9. There was a definite blush on the left leg, headache, malaise and slight fever, the whole thing clearing up in one day. However I did not feel very encouraged over the matter and wrote to Dr. Birkhaug, who was quite interested in my patient. He said, "Her case seems to fall into that category of recurrent erysipelas which remains hypersensitive to streptococcic antigens in spite of vigorous attempts to immunize against the malady. These persons note however that attacks subsequent to a course of intradermal immunization are much less severe than previous ones."

He suggested three more larger intramuscular injections adding that, "The results of these injections should become apparent within the next few months." On July 25th, 1932 the 10th attack occurred, and it was quite a severe one, at which time I was out of the city and she was seen by Doctor Murray Kinsman. When I returned August the 1st, the attack was still in evidence, the leg still large, puffy, and red. I attempted a culture in the manner of Birkhaug but got only 3 types of staphylococci, I hemolytic, I aureus, and I albus, no hemolytic strep. Twelve days later the patient came in to be checked over, the left leg was still swollen and reddish in spots. There was little of interest on physical examination. Her blood pressure was 120/90, weight 167½ lbs. Her tonsils were not entirely above suspicion and she has been advised to have them out, although it is very unlikely they bear any relation to her trouble.

In the meantime I had written Doctor Amoss about her and started her on his foot regime which is as follows:

Suggestions for Treatment of Epidermophythosis.

Morning Care:

Wash with soap and warm water.
Apply 70 per cent alcohol with cotton,
Allow to dry.
Apply generously dusting powder of the following formula:

| | |
|---|---|
| Salicylic acid | 6.0 |
| Thymol iodine | 1.0 |
| Boric acid | |
| Starch | aa 50.0 |

4 P. M.

Repeat morning care. Change socks.
(Discarded socks should be boiled immediately or placed in 1 per cent formalin).

Night Care:

Wash with soap and water
Apply 70 per cent alcohol
Allow to dry.
Apply Whitfield's Ointment.
Sleep in cotton socks reserved for this purpose.

After two weeks night application not necessary. Change of socks in afternoon not necessary in cool weather but socks should be changed daily.

He kindly sent me samples of 4 strepallergin made from 4 separate strains of streptococci. They were 4 of the 7 strains Mulford uses in immunizing horses to prepare their antitoxins. In dilutions of 1:1000 I injected 0.1 c. c. of each of the 4 samples and read the reaction in 24 hours. Three were absolutely negative, and one a frank positive. At 4 or 5 day intervals I injected increasing strength and quantity of this toxin, running up to 6 injections of 1 c. c. of the undiluted toxine. About November 1, 1932, without pain, the great toe nail became loose and came off in one piece and my hope is that this will help stop the process.

The patient was retested again for sensitivity on January 24, 1933 and reacted positively still to 0.1 c. c. of 1:100 streptallergin. She was given 4 more injections of undiluted toxin of 1 c. c. each and was retested again on March the 11th when she gave her first negative reaction. This was my first real encouragement. She has gone about 9 months now without an attack, which is a long time for her.

There are still other methods of procedure to be tried. A communication from Doctor O'Leary at the Mayo Clinic states that he has "found that foreign protein therapy is of more value than autogenous vaccine in the treatment of recurrent erysipelas." He stated the treatment would extend over a period of two months and the idea would be to produce a febrile reaction of rather high degree. Personally I prefer to continue trying with the streptallergin which seems the more logical approach.

I have reported this case because of its rarity and its many interesting angles. Without the loyal co-operation of an intelligent patient this investigation could not have been carried on. In this report I have not included repeated routine laboratory examinations as they revealed nothing of any bearing on this condition.

## DISCUSSION

**Robert L. Kelly:** My experience with erysipelas has been confined to two cases. One was in a child, two years old, following an abrasion of the shin. The disease rapidly went up the leg to the body, then to the face and the patient died within six days.

In the second case, the patient came to my office about four years ago with an erysipelatous infection over his nose, where we usually see it. I sent him to the hospital and treated him with anti-toxin, compresses, ichthyol and painting with mecurochrome and iodin, which does not seem to do any good either.

Amoss thinks that recurrent erysipelas starts from ringworm of the toes and he advises clearing up that condition in treating the case. I saw a case with Dr. Flexner in which the patient did have definite ringworm and we treated her for it, but she had a recurrence nevertheless. Once they have ringworm they always have it. However, I fail to see the connection between this condition and erysipelas. MacLarsen also thinks that ringworm of the feet has something to do with it.

**Winston U. Rutledge:** One interesting phase of the subject is the differential diagnosis between erysipelas and other dermatological conditions which might simulate it. One of the most frequent conditions which might confuse us is dermatitis venenata, the most common example of which is poison ivy. It produces a certain amount of inflammatory reaction and vesiculation which might easily be mistaken for erysipelas. Some cases of eczema or angioneurotic oedema might also simulate erysipelas, but all of these are local in reaction without any of the systemic features, such as chills, fever, nausea and vomiting which we see associated with erysipelas. Certain forms of laryngitis associated with tuberculosis or syphilis might simulates erysipelas, but here again we have a slow process which rarely causes systemic disturbance.

Dr. Flexner's paper is interesting from a number of angles. As he has pointed out, streptococcic infection causing scarlet fever, for instance, confers an immunity on the patient while the infection causing erysipelas does not, but, on the other hand, apparently predisposes the patient to a second attack. This is probably because there is a certain amount of residual toxaemia which gives the patient a lowered resistance and which may subsequently be the site of a second, or even a third or fourth infection.

Like Dr. Kelly, I have seen only a limited number of cases of erysipelas in private practice. Most of the cases I have seen have been in the City Hospital, and the majority were terminal infections in old debilitated persons.

A case I saw recently was in a previously perfectly healthy adult who had been playing golf during the day and that night he developed intense pain in the leg and the next morning he had a palm-sized area of sero-sanguineous vesiculation on his leg. He called me in the afternoon and by that time it had spread to his knee and there were a number of red lines of lymphangitis extending up to the hip. He did not have much systemic reaction. His temperature was 100½ F. and he was feeling pretty badly, the leg paining him considerably. I began the use of erysipelas anti-toxin immediately. By the next morning the lymphangitis had disappeared and the leg was much more comfortable. After three injections there was a noticeable decrease in the irritation and oedema in the leg and in five days he was perfectly well.

There is one thing we must bear in mind in giving erysipelas anti-toxin. We all have a tremendous fear of anaphylaxis and although this

man gave no history of having taken horse sera I tested him and after giving an injection of anti-toxin I hung around with a bottle of adrenalin in my hand but nothing happened. I think anti-toxin is our most reliable therapeutic agent in these cases. Local applications seem to do very little good.

**James W. Bruce:** The mortality from erysipelas in the newborn is placed by most authors at between ninety and one hundred per cent. However, at the City Hospital, by means of repeated intravenous injections, blood transfusion, the free use of erysipelas anti-toxin and, more recently, the use of ultra-violet rays, the mortality figure has been reduced considerably. I do not recall the exact figure but my impression is that it is not more than fifty per cent. Transfusions are given every other day as long as the patient is toxic; erysipelas anti-toxin is used right along with it and the ultra-violet rays are applied practically every day.

**John W. Moore:** I have never seen a case of recurrent erysipelas. We have had quite a few cases of erysipelas in the aged at the City Hospital in which we have used anti-toxin, metaphan, iodin, and almost everything else, and I still agree with Osler, who had an enormous amount of experience in dealing with this condition. He said you can apply a little magnesium sulphate to the local lesion if you care to and let the disease run its course, and the mortality is not exceedingly high. That has been more or less our experience at the City Hospital. Regardless of what you do one of two things happens; they get well or they die.

**Max Garin:** I would like to mention one point in connection with the use of erysipelas anti-toxin. In one case that I saw, a rapidly advancing lesion was definitely circumscribed by local subcutaneous injection of anti-toxin to form a complete ring around the lesion. This case was in the practice of another physician and he told me that he had done this in other cases and had never seen the lesion advance beyond the circumscribed ring.

**John R. Peabody:** I do not know that I am qualified to discuss this paper having never seen a case of erysipelas in private practice. The nearest approach to it was about three years ago in a woman who was visiting here from New Orleans. She consulted me for a chronic external otitis, and told me that she had suffered five or six attacks of erysipelas in New Orleans. I do not know what treatment she received. I was very much surprised and rather inclined to doubt the diagnosis until I learned that such recurrent attacks of erysipelas in the external auditory meatus do occur.

I have been on the lookout for this complication following mastoid operations but have never seen a case. The text-books tell us that a chronic sinusitis probably predisposes the individual to an erysipelatous infection because so large a number of cases, ninety per cent or more, occur on the face.

It seems to me that this disease must be wearing itself out; we do not see much of it nowadays. Whether this is due to the fact that we are better able to protect our patients from infection from the sinuses or from outside sources, or whether immunity to the infection has gradually been established, I do not know but it is rather surprising that in fifteen years work in various hospitals I have not seen a case of erysipelas following mastoidectomy.

**John W. Price:** I have been very much interested in Dr. Flexner's paper. As I look back over a period of many years of practice, including industrial and hospital service, I have rarely seen a case of erysipelas except in a ward which was set aside for the treatment of these cases in Blockley Hospital in Philadelphia. There I saw upwards of two hundred cases in three of four years. It was during that period that the use of magnesium sulphate as a local application was begun in preference to ichthyol. I remember some wag said: "If you have a friend with erysipelas, use magnesium sulphate; if he is an enemy use ichthyol." Nevertheless, there were some who preferred ichthyol. Some of these patients died and some got well, but all in all those treated with magnesium sulphate seemed to be more comfortable and my recollection is that the mortality rate was reduced. During that time I do not recall any one using vaccines except a few whom we called cranks, who were using vaccines for everything that came along. It seems to me, however, in view of the recent reports of Amoss and others, vaccine should be used because there is a possibility of its doing some good.

**J. Rowan Morrison:** Like Dr. Moore and others I do not know of much that we can do in these cases. I recall that when I was an interne we used wet dressings and ichthyol and painted iodin around the lesions and so on, but they did not seem to do much good.

The trouble with erysipelas is it does not always play fair. I recall a case in an aged man, very poorly nourished. It started on his face and spread down to his feet and then over the top of his head and down his back. The infection continued for several months but it was not very severe or he would have died.

Local application of magnesium sulphate seems to do about as much good as anything. In the old days we used to give these patients tincture of iron and quinine. I do not know whether it did any good or not.

I have come to the conclusion that erysipelas, like the wind, "bloweth where it listeth and no man knows whence it cometh nor whither it goeth." I have used erysipelas anti-toxin once or twice. Whether it helped I do not know, but the patients got better.

**J. Garland Sherrill:** We formerly recognized

two types of erysipelas; one, superficial or cutaneous erysipelas and the other of the phlegmonous type, the clinical pictures of which were very different. The first was a mild type and the patients got well under ordinary treatment, but in the more severe phlegmonous type they were much more serious. The combination of a severe infection with the run-down condition of the patient's system and lack of resistance sometimes resulted in a fatal termination. At that time we did not know whether it was a blood-stream infection or not. In the mild type the condition is probably local and spreads locally through the superficial group of lymph vessels, while in the more severe types there is probably a blood-stream infection present.

As to treatment, everything appears to have been mentioned except whiskey, which we used freely and considered it our sheet-anchor in the treatment of these cases. Dr. Flexner's paper has given us some new thoughts along this line and if they lead to a better knowledge of how to control and prevent this disease, much will have been accomplished. The use of tonics as suggested by Dr. Morrison always seemed to me to do good in these cases. Tincture of chloride of iron and quinin we thought was helpful in building up the patient's phagocytosis.

**A. J. Miller:** One method of treatment of this condition has not been mentioned. I saw it unsuccessfully tried in the case of a man about 50 years of age, who developed erysipelas of the hands. He was treated by a surgeon who made multiple linear incisions in the skin well in advance of the lesion in the hope of producing by sterile irritation of the skin enough reaction to check the progress of the lesion. The lesion did stop at the point of irritation that the surgeon produced but it was an extremely severe infection and the man died.

I think perhaps recurrent erysipelas is similar to other infectious diseases. It seems that certain individuals are not capable of developing immunity to the same degree as the average normal individual. I remember seeing one individual who was having his twenty-first attack of pneumonia. He was never extremely ill but he had pneumonia several times each winter.

**W. E. Gardner:** Dr. Flexner said that his patient had a tendency to hypertension and I am wondering whether all this hyperpyrexia is going to prevent her from having a hypertension later on.

**Morris Flexner,** (in closing): Dr. Gardner asked a question I am not sure I can answer, why this woman's blood pressure came down. She had five or six badly infected teeth which were removed and possibly that had something to do with it. She is certainly in better health today than when I first saw her. Her weight fluctuates somewhat. She gets it down and as in the case of all big eaters, it goes up again.

Some one asked a question about immunity. According to the statistics of Birkhaug, in 342 cases the disease recurred in 7.3 per cent, which is a fairly small percentage.

I was very much surprised to hear men of wide clinical experience say they had seen so few cases of erysipelas. In my private practice, I have had some ten or fifteen cases, although the one reported tonight is the only case of recurrent erysipelas that I have seen.

As to the question of predisposing factors; I recently saw a case in a man who is a golf player and has ringworm of the feet. He developed an infection of the foot that was about as close as it could come without actually being erysipelas. He had a definite cellulitis extending all over the top of the foot which finally localized, but it was apparently the same type of process that occurs when erysipelas begins with ringworm of the feet.

## SPONTANEOUS RUPTURE OF LIVER ABSCESS*

HARRY S. FRAZIER, M. D.

Louisville.

Patient female, white, age 28. Previous history unimportant. She had an attack of acute appendicitis on October 28, 1932, and was operated upon. The appendix was removed and the abdomen closed without drainage. On the 5th postoperative day she had an acute streptococcic sore throat which responded to treatment and subsided in five or six days. This was immediately followed by symptoms of an acute pyelitis, the urine containing much pus and colon bacilli. This condition ran a rather hectic course for five or six weeks and finally subsided. About this time there was noticed an enlarging mass in the abdomen under the right costal margin and a mild jaundice manfested itself. Th patient became definitely septic, colon bacilli were obtained from the blood stream and the jaundice grew deeper. She was variously treated with transfusions, metaphan intravenously, etc.

In the latter part of January, 1933, (eleven weeks later) because of the large, smooth tender mass in the upper right quadrant of the abdomen, which was evidently the liver, an attempt was made to aspirate what was presumably a liver abscess. This was unsuccessful although the needle was introducted at several different angles. At this time there was positive blood-stream colon bacilli and the white cell count was 55,000; polymorphonuclears 95 per cent with a icterus index of 44. The patient was deeply jaundiced and extremely emaciated. Temperature from 100 to 103 daily.

One morning I was called to see the pa-

*Read before the Louisville Medico-Chirurgical Society,

tient because she was coughing violently, and with almost every cough she brought up a large quantity of yellowish, definitely bile-stained material which had no odor. At first the expectorations were blood-tinged and after that of a rather rusty color, and then this deep yellow sputum supervened. Her right chest was full of moist bubbling rales. There was absolute flatness on percussion and a diminished note all over the right chest. The left lung was entirely clear.

This condition continued for about twelve hours, with the patient in the greatest distress and then gradually subsided, and in about sixteen hours she gave evidence of the greatest relief. The jaundice disappeared in the course of the next six or seven days and the white cell count fell to 14,000 with 80 per cent polys. in about the same time, and she went on to an uneventful recovery. Within two weeks the blood count was normal and she gained 32 pounds in a matter of four weeks. She left the city to convalesce in the South and I have since received word that she had an attack of fever, nausea and vomiting and I was asked to send the doctor there a history of the case.

I present this case principally for discussion as to the probable prognosis. Examination of the sputum which was so heavily bile-tinged showed nothing except that the nitric-acid spectrum test for bile was positive and there were a good many pus cells in it. We were not able to obtain a culture.

## DISCUSSION

**Guy P. Grigsby:** I would like to ask Dr. Frazier how much time elasped between the efforts at paracentesis and the rupture of the abscess?

That was a point I wanted to bring out. While the attempts at paracentesis were unsuccessful it is possible that they provided a puncture wound through the diaphragm that would materially shorten the time of rupture. I think we are more likely to see spontaneous rupture of a subdiaphragmatic abscess than of a liver abscess. I can recall two cases of that type, in neither of which was the outcome as favorable as in Dr. Frazier's case.

I would also suggest the possibility that the bile duct was punctured at the time parencentesis was atttempted, which might account for the presence of bile and the expectorated material.

**A. J. Miller:** It is possible for an appreciable quantity of bile to be demonstrated in the pus in a case of this kind and it is not unmistakable evidence of liver involvement. I believe Virchow was the first to recognize the formation of bile pigment in chronic abscesses anywhere in the body, the bile pigment being produced in the abscess wall by endothelial cells.

**Oscar O. Miller:** My impression is that this was a liver abscess. There is very little difference in the physical findings in these cases, whether the abscess be below the diaphragm or above it. It is unfortunate that a culture was not made. It is rather evident that it was not a colon bacillus infection, as the pus had no odor.

As to the prognosis in this case, it is evident that the abscess cavity has become walled off at the side of the diaphragm and there may be reaccumulation of pus under pressure, causing a toxaemia.

**C. D. Enfield:** There is an x-ray technique by which the extent of liver damage can be determined quite accurately in cases where the trouble and possibly slight risk involved are considered justified. About two years ago some German experimenters introduced a preparation of colloidal thorium under the trade name of Thorotrast, which, when injected intravenously, is deposited in the liver and spleen and renders these organs much more dense as regards penetration by the x-ray than the normal organ. Areas of locally decreased density as compared with the generally increased density as visualized on x-ray films are then interpreted to indicate liver pathology. Localized involvement such as abscess, carcinoma have been demonstrated by this method with confirmation at autopsy.

The preparation is administered intravenously in small doses on three or four successive days and films are made after the series of injections is completed. So far as is known, the thorium deposit causes no functional impairment in either the liver or spleen. Examination many months after the injection, however, shows that the density persists and it is not known when, if at all, the thorium is finally eliminated.

Such a technique would be applicable to the case Dr. Frazier has reported and should indicate very definitely the extent of liver damage provided destruction of liver tissue has occurred, as seems certainly to be the case.

**J. Garland Sherrill:** I have had two cases similar to the one reported by Dr. Frazier, which I will briefly mention. The first was a man whom I was called to see for acute appendicitis. This was in the early days of appendectomy and the patient declined operation. The attending physician and myself attempted to carry on the best we could and a week later the patient developed a mass in the abdomen which was evidently a large purulent collection. Surgery was again offered and refused. By this time the mass had become very large and tender and the man began to expectorate pus from the right lung and as the expectoration continued the mass in his right side grew smaller. He evacuated the abscess through the right bronchus and the final result was that the patient got well without operation.

Another case was during the World War in a young man sent in from the field hospital with a diagnosis of acute appendicitis. I was at the front when he came into the base hospital. When I saw him on my return, he was jaundiced, had a septic temperature and considerable enlarge-

ment of the liver. I went over the case very carefully and made diagnosis of acute appendicitis with a small pus collection, thrombosis of the appendicular vein, pyelo-phlebitis and liver abscess He died a week later and post-mortem showed several abscesses in the liver and also an abscess of the lung.

In Dr. Frazier's case, since the patient has gone along as far as she has, and in view of the fact that the pus was sterile, I think it probable that she will make a complete recovery.

**Louis Frank:** Two factors must be considered in a study of this case. Four months is quite a long time for organisms from an old appendicitis to lie dormant We occasionally see cases of abscess in the liver following appendectomy but they are of metabolic origin. We also see a type of abscess occurring around the liver in those cases of appendicitis where the appendix lies retroperitoneally, behind the cecum, with direct extension giving rise to a sub-diaphragmatic abscess, which is quite a different thing to abscess in the liver as a result of metastatic infarct and where this occurs the abscesses are usually multiple, as in Dr. Sherrill's case, rarely are they single.

Another factor to be considered in Dr. Frazier's case is the question of the relationship between the abscess and the severe angina this patient had. Graham, in a recent article, has pointed out that all inflammations or infections occurring in the upper respiratory passages are immediately visible also in the lower respiratory tract, in the bronchi even to the terminal branches. So the relationship between the upper respiratory infection and the infection which may have occurred in the lower lobe of the lung overlying the liver must also be taken into consideration.

In Dr. Frazier's case from the fact that the condition subsided, I am inclined to believe that it was probably a sub-diaphragmatic infection rather than a liver abscess. It would be interesting to know what the galactose tolerance test would have shown. In conditions involving the liver cells this is a factor which should always be worked out before making a positive diagnosis. Sub-diaphragmatic abscess is usually due to infection about the appendix and in former years, when we did not recognize such conditions as early as we do now, these cases presented a picture very similar to the one described by Dr. Frazier. At the present time we recognize retroperitoneal appendices and infections of this kind much earlier, and by prompt operation prevent many cases similar to Dr. Frazier's.

**H. S. Frazier, (in closing):** I very much appreciate the discussion and the many suggestions which have been made.

This patient's liver was definitely enlarged, measuring three finger-breadths in the median line and two in the axillary line. While I considered the possibility of subphrenic or pulmonary abscess I did not see how either of these conditions could produce so much bile in the expectorated material. I was never able to explain this satisfactorily to myself unless a bile duct was perforated in the attempts at paracentesis.

In reply to Dr. Grisby question, it requires thirty-two days.

## SYMPOSIUM ON DISEASES OF THE PANCREAS

## DISEASES OF THE PANCREAS, A DIAGNOSTIC CONSIDERATION*

VIRGIL E. SIMPSON, M. D.

Louisville.

The pancreas is the second largest accessory digestion organ and is indispensable in the maintenance of life. It really dominates the digestive chemistry of the small intestine. The infrequency of preoperative or ante-mortem diagnosis of pancreatic disease continues to be a sorry page in present day medicine. The excuses are always ready at hand, the central location of the glands, its inaccessibility to Roentgen ray visualization, the infrequency of autopsy and the comforting assumption of its rarity. This latter excuse becomes untenable when it is recalled that as long ago as 1907 Mayo-Robson and Cammidge found pancreatic disease in over 2 per cent of 6,708 autopsies, while in 1925 Barron found records of disease of the pancreas in 73 cases (2.3 per cent) of a record of 3,437 necropsies. The usual means of approach for study of function of other organs are less readily applicable in pancreatic disease and affords an added reason for its tardy recognition.

One is not surprised, then, to find no adequate classification of the pathological status of the pancreas. Joachim proposed the following grouping for purposes of clinical classification: It is based on an anatomical conception, however, and takes no recognition of a pathological process which involves two or more structures. It is, likewise, incorrect by inference, since neoplasms, for example, are placed under "parenchyma," whereas, the neoplasm may originate in the stroma or ductal tissue.

The "interacinar" grouping is a helpful one and squares with the modern concept of diabetes.

JOACHIM'S CLASSIFICATION

1. Excretory ducts.
   (a) Anomalies.

*Read in Symposium on Diseases of the Pancreas before the Jefferson County Medical Society, June 5, 1933.

(b) Inflammations.
(c) Calculi.
(d) Cysts.
2. Blood Vessels.
(a) Trauma.
(d) Diseased blood vessels.
(e) Diseases of the blood.
(d) Infections.
3. Parenchyma.
(a) Inflammatory.
(b) Degenerative.
(c) Neoplastic.
4. Stroma.
(a) Interlobular panereatitis.
(b) Interacinar panereatitis.

It is, obviously, impossible to discuss, even briefly, in a symposium such as this all of the diseases found in the pancreas. Hence anomalies, degenerations, injuries, suppurations, syphilis, tuberculosis, hemachromatosis, arterio sclerosis, hemorrhage, however interesting, are not covered. Such omissions are not to be interpreted as evidence of an absence of even casual importance.

### Acute Hemorrhagic Necrosis of the Pancreas

In order to understandingly discuss acute panereatitis some agreement must be reached as to a classification. Not a little of the symptomatology is determined by the stage of the disease at the time studied and much of therapeutic procedure is also thereby determined.

Opie thought the process was primarily a necrosis and hemorrhage and suppuration the secondary changes. Fitz offered a classification providing for:—

1. Acute hemorrhagic panereatitis.
2. Gangrenous panereatitis.
3. Suppurative panereatitis.

Kemp speaks of this as the "best classification" then offered, yet recognizing that acute hemorrhagic panereatitis was not really an inflammatory process except at the margins of the necrosis. Wolfer doubts the existence of necrosis in the less virulent types, such as occur with mumps and other acute infectious diseases. In such cases it seems that the pathology is in reality an inflammatory process. Since the intestinal juice activates the pancreatic enzymes, one can understand that when regurgitation of duodenal contents into either of the main ducts in the pancreas occurs, acute necrosis follows. Brody and Custer have offered a classification which is based on their laboratory studies as follows:—

Acute Hemorrhagic Necrosis of the Pancreas.

I. Inflammatory.
(a) Dependent on cardio-vascular disstruction of the biliary tract.
(b) Dependent on obstruction from contiguous structures.

II. Degenerative.
(a) Dependent on cardio-vascular disease.
1. Congestive heart failure type.
2. Hypertensive arterioselerosis type (pancreatic apoplexy).
3. Embolic type.
(b) Dependent on general toxic phenomena.
(c) Dependent on trauma.

Such a classification seems to be open to several objections from a clinical viewpoint. Certainly "degenerative" changes would scarcely come within the scope of a clinical concept of an acute disease of the panereas except in the instances of panereatic apoplexy and embolism, and in the latter one sees no reason for putting embolus as a causative factor, necessarily, in relation to degenerative changes in the pancreas itself. I have never seen a case of congestive heart failure present a clinical picture that attracted my attention to the pancreas. Their explanation of how necrosis and hemorrhages in the panereas occur in consequence of congestive heart failure causing an activation of the trypsinogen is interesting. I think their classification from the standpoint of pathology is satisfactory if one excludes the time element, but I see difficulty in adapting it to clinical work.

The onset of acute pancreatitis is violent and the pain is probably equalled in severity only by coronary occlusion, mesenteric thrombosis and ruptured ectopic pregnancy. It is more constant than that of a perforated peptic ulcer or of a calculus in transit. There is little or no radiation, though occasionally it is referred toward the left shoulder. There has not been a satisfactory explanation of the unusual severity of these symptoms. Chamberlain thinks both the pain and the shock are due to pressure on the coeliac plexus. Death may occur in a few hours and the diagnosis only made at autopsy. The toxemia is profound and is not unlike that of obstruction high up in the small bowel and Wolfer suggests it may be due to the absorption of a split protein molecule resulting from panereatic autolysis. Certainly this explanation offers a stronger appeal than that of Hunt, who thinks it is due to a rapid hypoglycemia resulting from liberation of insulin. An epigastric or localized peritonitis obtains, which may become general. Tender spots over the abdomen are not infrequently found and are thought to be areas of fat necrosis. Purpuric areas may appear on skin or mucous membranes. The vomitus contains food at first, then bile, and finally dark blood. It is rare that the vomitus becomes fecal. The absence of visible peristalsis of the intestines helps to exclude intestinal obstruc-

tion. When gangrene obtains, symptoms of sepsis appear with irregular temperature and chills, while diarrhea replaces the previous constipation and the condition takes on the features of chronicity. The temperature is subnormal during the period of shock, rising to 102-104 F. within 24 hours if the patient survives the initial insult. When it occurs as a complication of epidemic parotitis, the temperature rise occurs between the 5th and 10th days, reaches a maximum of 103 to 104 in 24 hours, returning to normal in from three to five days. Pancreatitis is a rare complication of mumps, only 14 occurring in nearly 6,000 cases of mumps observed at Camp Wheeler in 1918 by Radin. The blood pressure falls and the skin is pale, cold and moist. A peculiar discoloration of the abdominal wall was described by Halstead in 1901. Turner thinks this cyanosis is due to a retro-peritoneal digestion of tissue, while Bailey thinks it is due to the toxemia and other observers have attributed it to anoxemia. Its significance is important when present, but I conclude from a study of the literature that its incidence is not high enough to be a dependable sign. Sphincteric incontinence is usual. Vomiting is the rule and is copious and persistent.

As the stage of collapse subsides the abdomen becomes distended and often guard is present. The distention is due in part to the accumulation of fluid, but is not infrequently the result of atony of the bowel. If a mass is felt in the epigastric region, it may be due to either an enlarged pancreas or to the omentum which apparently attempts to wall off the pathology. The blood count shows a leucocytosis unless the case dies early in shock. When the pathology has progressed to a gangrenous stage, which may, strangely, last for several weeks, there may occur toward the end a leukopenia; the blood picture may present a neutropenia, giving rise to a diagnosis of malignant neutropenia, now so feverishly competing with coronary occlusion as a diagnostic fashion. The polys run up to 85 or 90 per cent, the lymphs are much reduced and there is an increase in the non-filamented forms. Such a blood picture helps differentiate the condition from the colic of calculi and cholecystitis, some conditions likely to be confused. A tumor is infrequently felt in acute pancreatitis. Edgecombe and Jacob each have reported a case with a palpable pancreas. The finding of a tumor on laparotomy may be confusing; the tendency of the surgeon is to label all tumors as cancer, yet a decided enlargement of the pancreas may be felt which is but a part of the picture of an acute hemorrhagic necrosis of the pancreas. On account of the acute nature of the process, prolonged laboratory study is not available. The laboratory study and the x-ray examinations are discussed elsewhere.

Barren insists on repeated examinations of urine for sugar. If the necrosis is extensive the islet tissue may be sufficiently damaged to cause a severe hyperglycemia. Rodriguez reports a death in diabetic coma in a case who was a non-diabetic prior to the onset of the acute illness. The post mortum showed an acute hemorrhagic necrosis of the pancreas reaching the stage of suppuration.

The attempts to classify acute pancreatitis as hemorrhagic, gangrenous and suppurative are of little value clinically. They are but different stages of one pathologic process which begins usually as a necrosis.

Ascites may develop; the mechanism of its development is different from that which obtains in cancer or cyst. In the various stages of an acute pancreatitis, especially in the gangrenous, the foramen of Winslow is closed by adhesions and fluid accumulates in the lesser peritoneal cavity. This fluid contains some pancreatic secretion, usually, and is sterile early in the disease, but almost always becomes infected. In reality the condition is now an abscess and may erode through the abdominal wall in the left lumbar region or perforate into the greater peritoneal cavity. Perforation into the stomach or bowel has been reported, necrotic pancreatic tissue appearing in the stools.

The relationship between gall stone and acute pancreatitis has been of clinical interest since Opie showed that a gall stone lodged at the ampulla of Vater might divert bile into the duct of Wirsung and cause acute hemorrhagic necrosis of the pancreas. On account of the anatomic relations of the common bile duct, the duct of Wirsung and the duct of Santorini in only 30 per cent of humans, it is possible for a stone in the ampulla of Vater to cause pancreatitis. Further, since in 10 per cent of humans the duct of Santorini is as large as that of Wirsung and is patient at the lesser pavilla, it follows that this group do not develop pancreatitis even if a gall stone is lodged in the Vater ampulla.

It must be differentiated from perforating peptic ulcer, acute gall bladder disease, acute intestinal obstruction, renal, biliary and pancreatic calculi, angina pectoris, coronary occlusion, ectopic gestation, incarcerated epigastric hernia, spasm of mesenteric arteries, thrombosis of superior mesenteric or splenic artery, left adrenal hemorrhage, perforation of an undescended retrocolic appendix, cecal plexus neuralgia and gastric crises of locomotor ataxia.

### Chronic Pancreatitis

Since chronic pancreatitis may be caused by a number of primary diseases, such as gall

bladder disease, tumors, duodenal disease, etc., the symptoms of these primary diseases may obscure the clinical picture of the pancreatic disease.

The statistics of Deaver showing disease of the gall bladder or ducts in 65 per cent of all his cases of pancreatic disease; of Mayo who found gall stones in 81 per cent; and of Robson, who reported 60 per cent, indicate the clinical difficulty of diagnosing chronic pancreatitis. Then, too, it must be emphasized that tumors, cysts, calculi, infectious diseases, tuberculosis, lues and alcoholism may all terminate in a chronic pancreatitis. No wonder Opie wrote, "the lesion is seldom associated with such definite symptoms as to be recognized during life, and that, even at autopsy, the condition is frequently overlooked." Contrast such a statement with that of Robson and Cammidge, who stated that "a correct opinion may be formed in a large majority of instances." One finds it difficult to harmonize such extreme views.

If the disease is of the chronic interacinar type, the acini become largely or completely replaced by scar tissue and the appearance of diabetic manifestations make the diagnosis easier. But since this form is less frequent than the interlobular type, the diagnosis of a large group remains difficult. There is often no pain except on some exacerbation of the primary condition. It may take on any degree of severity, from a dull ache to that of a colicky one. The location of the pain is not very helpful. Tenderness over Robson's point (above and to right of umbilicus) or in the mid-epigastrium constitutes the most frequent locations. Temperature is usually absent. Vomiting is, perhaps, as constant as any single feature, yet there is nothing characteristic of this symptom.

Since in about 66 per cent of all persons the common bile duct transverses the head of the pancreas, jaundice may be an important finding. It is not unlikely that some of the cases we diagnose as catarrhal jaundice are really chronic pancreatic disease.

Fussell thinks nausea and vomiting are common and that jaundice occurs in over 60 per cent of cases.

Gastric analysis may be of assistance if the oft repeated statement can be credited that hyperacidity is found in gall bladder disease, while a hypoacidity characterizes pancreatitis. When jaundice does occur it is usually painless, and varies in intensity from a slight tinge of yellow to a dark olive. Opie think that when jaundice does occur, it is generally due to cholelithiasis or other hepatic disease. The gall bladder is often found enlarged in chronic pancreatitis, especially when of long duration. The enlargement is usually quite marked; this is in striking contrast to the contracted gall bladder nearly always found in stone in the common duct with jaundice.

The association of cirrhosis of the liver with this disease is noteworthy and may occur independent of jaundice.

Some degree of digestive disturbance usually accompanies a chronic pancreatitis. The impairment of appetite, disgust for meats, loss of weight, changes in character of stools, appear in measurable degree with the severity of pancreatic pathology. The stools in pancreatic disease have achieved a classic description. They are always described as *large, soft, pultaceous and contain fat and muscle fibre.* This would be easy if all clinical medicine were classic; the stools of a diarrhoea may be large and those with an absence of bile are light in color, while the highest fat content Pratt found in his series occurred in a case of sprue (86.2 per cent). It is only in an advanced disease that pale, greasy, offensive, frequent, bulky stools are seen. They may be large and those with an absence of bile normal stools; then the total amount of unabsorbed fat may reach as high as 60 per cent. A fatty stool is light-colored regardless of its biliary content. When a stool is clay colored, the conclusion that bile is absent is not warranted without a chemical test for bile. The color of the stool in chronic pancreatitis may vary from a gray to a glistening white or, when the fat is in crystalline form, it may resemble aluminum paint. The fat may be in the form of oil when first passed, but solidify on cooling. More rarely does the fat appear as small, crumbly, whitish masses. These variations in the appearance of fatty stools depend, no doubt, on the kind of fat in the patient's diet.

The physical examination in chronic pancreatitis is helpful chiefly in excluding other diseases rather than in definite findings pointing to the pancreas. During periods of exacerbations muscular rigidity and epigastric tenderness may be present. A mass is not commonly felt and then usually when the patient is under an anesthetic. If a mass is felt, some conception of its relation to the stomach and duodenum may be obtained by inflating the stomach. Tenderness may or may not be present, and the same statement holds good of muscle guard. Deaver in his analysis of 60 cases stated that first symptoms were disturbances of digestion, followed by pain after eating. The relation of food and pain in chronic pancreatitis is surely not very constant.

In chronic pancreatitis the gland becomes very hard, somewhat enlarged early, but later becomes contracted because of interstitial scar tissue. A definite tumor is rarely palpable, an indefinite tenseness or resistance in the

epigastric region being the usual finding. An enlarged head of the pancreas may press on the duodenum and produce a partial stenosis. It would seem that very little difficulty should be experienced in differentiating gall stones from chronic pancreatitis, but when one recalls that a chronic pancreatitis may, quite frequently, be associated with gall bladder disease, in fact, dependent upon it, one is prepared for such difficulty. The existence of both is sometimes revealed at operation and a removal of the stone and drainage of the bladder relieves the chronic pancreatitis.

The use of calcium chloride may help to differentiate chronic pancreatitis from gall stone colic, as well as lead colic or renal colic. 20 c. c. of a five per cent solution is given intravenously and, according to Aub and his associates, immediate relief of pain is secured when due to lead poisoning or kidney and gall stones. When the pain is due to cholecystitis without stones or to peptic ulcer the relief is not complete.

Recurrence of symptoms after subsidence occurs in chronic pancreatitis rather frequently. In this respect it resembles peptic ulcer, but differs markedly in its lack of seasonal recurrence, which is so characteristic of peptic ulcer. On the other hand, if the pancreatic disease is secondary to peptic ulcer (duodenal) the recurrence of ulcer symptoms will be accompanied by pancreatic symptoms.

Chronic pancreatitis may progress slowly over a period of years, the patient eventually dying from diabetes, asthenia or purpura. The latter is the most discouraging development. A pancreas may show, histologically, well marked lesions or rather extensive distribution, yet sufficient normal parenchyma remain intact for normal function to be carried on. A species of compensatory activity, if you will, as when one kidney does the work of two after its fellow is removed. It is usually such cases that are not diagnosed.

In Barron's series chronic pancreatitis was found twice as frequently as was the acute form. The interacinous form may produce an atrophy and degeneration of the islet tissue and cause diabetes with its usual findings.

I think chronic pancreatitis is more frequently diagnosed by the surgeon than by the pathologist. An enlarged pancreas head may be only edema or an exudate of transitory duration. I am also of the opinion that some cases are overlooked in post mortem studies; sections are often not made; this is, perhaps, due to the recognition that studies of the pancreas are of less value when made several hours after death, since autolysis begins early.

It must be differentiated from sprue, Pick's syndrome, neoplasms, tabes mesenterica, amyloid disease, pellagra, gall stone, renal calculi, peptic ulcer, chronic malaria.

### Tumor Masses of the Pancreas

Neoplasms: A tumor mass may be expected in the largest single group of pancreatic disease. They are seldom benign and a tumor other than carcinoma is almost a negligible finding. The finding of a tumor on physical examination depends on its size quite obviously; almost equally as obviously it must depend upon the degree of adiposity of the patient. When a mass is felt it is probably not a neoplasm in about 0.04 per cent of such findings. That makes the diagnosis of acute and chronic pancreatitis which may also be recognized as a palpable mass a remote clinical accomplishment. The infrequency of a tumor in the pancreas has a diagnostic significance. In 11,472 autopsies Segre found only 129 tumors of the pancreas; Park reported but 226 primary cancers in 53,000 post mortems. This represents an incidence of 0.1 per cent in the second group. However, given a patient over fifty years of age, a male, jaundiced, an enlarged gall bladder, an epigastric tumor, rapid and profound emaciation, a pancreatogenous diarrhoea, with or without pressure symptoms, the reasonable inference is a tumor of the pancreas.

Since the head is the most frequent location of a tumor, the mid-epigastrium becomes the site of most of the masses. Covered as this is by the recti muscles the difficulty of palpation is apparent. Yet, despite the difficulties met in a physical examination, a mass may be expected to be diagnostically palpated in about 25 per cent of tumors of the pancreas. The normal pancreas cannot be palpated nor outlined by percussion in a normal abdomen. In an emaciated subject with a gastroptosis it may be felt as a rather doughy mass in the epigastrium about midway between the tip of the ensiform and the umbilicus. Otherwise, when the pancreas is palpated, the assumption is that it is enlarged. Such a mass is more often recognized as an area of increased resistance rather than a definite tumor. When definitely palpable it is usually an immovable tumor situated centrally, or a bit to the right, in the epigastric region. Immobility is not a constant feature of a pancreatic tumor. I saw a remarkably movable malignant pancreas. The patient, a physician had a definitely palpable pancreas, firm, fairly smooth in contour, only moderately tender, which could be pushed to the left of the anterior surface of the vertebrae when recumbent on the left side. Holding the mass in its displaced position with the examining hand and turning him on his back, the pancreas could be felt to slip over the vertebrae to its original position. Doubt was expressed as to the identity of the tumor, but at opera-

tion the surgeon confirmed the clinical impression of mobility. If the neoplasm be scirrhous in type, no tumor is felt usually. When a tumor is papable it ordinarily disappears on inflation of the stomach. A tumor in the tail of the pancreas may not be accompanied by digestive disturbances, jaundice is absent and the tumor is more or less mobile.

On account of its anatomical relations with the duodenum, portal vein, common bile duct, left ureter, transverse colon, inferior vena cava, thoracic duct, pressure on some or all of these structures may occur. Such pressure may then cause obstruction of bowel lumen, ascites, serous or chylous, jaundice, hydro-nephrosis, edema of the lower extremities. The clinical picture of these pressure effects differ in few essentials from similar conditions due to other causes. The jaundice of pancreatic tumors merits some comment. Since most tumors are found in the head of the pancreas, jaundice occurs some time during the course of their development in about 70 per cent of all cases. The intensity of the pigmentation is sometimes quite suggestive and is referred to as melanotic jaundice. It is usually progressive, but may subside, even disappear, to return at a later period. It is not easy to project in one's mind the mechanics of such appearance and disappearance. The detection of subclinical jaundice is facilitated by means of blood tests, such as the icterus index. Some information as to the origin of the jaundice may be afforded by a Ven den Bergh test. Transduodenal drainage may be informative if the ductus choledochus is not patent. If the hepatic and common bile ducts are open, the liver bile flows unobstructed into the duodenum, to be recovered by the duodenal tube. In such a finding, while occlusion of the cystic duct by a pancreatic neoplasm is a possibility, the conclusion that the jaundice was due to a stone or growth in the cystic duct would seem warranted.

Pain is a fairly frequent symptom in pancreatic neoplasms; it may be due to pressure on the celiac ganglia, obstruction of the pancreatic ducts or to an accompanying inflammation adjacent or in the neoplastic tissue. It is rather constant, dull, is located in the epigastric region and may radiate to the back or left shoulder. When due to the occlusion of the pancreatic ducts it resembles the pain of pancreatic calculi. On the other hand, absence of pain, even throughout the course of the disease should not lead to confusion.

Vomiting, which may be excessive, often occurs in neoplasms of the pancreas alone, but especially is it common if extension of the malignancy to the pylorus or duodenum occurs. The hydrochloric acid content of the stomach is often reduced or absent in these cases. The stools may be quite characteristic depending upon the degree of obstruction of the pancreatic duct. The amount of unabsorbed fat may reach the startling total of 90 per cent. Similar digestive disturbances develop in cases where adhesions are found. Diabetes develops only if an interacinar pancreatitis supervenes. Steatorrhoea is not a constant symptom and constipation is common.

The period of expectancy is less than one year usually, yet cases have been reported with a life period of as long as four years after diagnosis.

In considering neoplasms from a differential diagnostic viewpoint the following conditions must be excluded: Chronic pancreatitis, gall bladder disease, cancer of liver and duodenum or pylorus, horseshoe kidney, retroperitoneal tumors, aneurysm of abdominal aorta and pancreatic cyst. If the tumor is in the tail of the pancreas, splenic, renal and adrenal tumors must be excluded.

Cysts: A pancreatic cyst should furnish the richest clinical findings of all diseases of this organ. The symptoms are nearly or quite identical in all types. Those originating within the pancreas are of little importance and such as may be present are usually over shadowed by those due to pressure of the cyst on other structures. These pressure symptoms are similar to those enumerated under the heading "Neoplasms" and need not be repeated. Pain is one symptom showing some difference from that of tumor. It is more often absent, and when present it is rather a feeling of tension or fullness when due to the stretching of the cyst wall. If it is the result of pressure on other organs the character of the pain varies with the structure of the organ; for example, pressure on a nerve ganglia causes the same kind of pain as when the pressure is due to a neoplasm. There is no little difference of opinion as to the pain in cysts. Judd and his associates in analyzing a series of 47 cases state that a "mass is the most important subjective symptom." They say 91 per cent of their group complained of pain. Kemp, Butler and Joachim emphasize the frequent absence of pain. Again, obstruction of bowel lumen is less frequent from cysts than neoplasms. Jaundice is much less common also; this is due to the less frequent location in the pancreas head of cysts than tumors. Bulky, pale stools are infrequent and when found are evidence of advanced chronic pancreatitis. The physical findings are considerably influenced by the type of cyst. Retention cysts are slow in formation and attain considerable size before detected. Hemorrhagic cysts are usually of rapid development, single,

large, are situated in the tail and are initiated by a clinical picture of hemorrhagic necrosis. Traumatic cysts yield a history of injury, though this injury may have occurred a few weeks or a few years previously. In many of the so-called pseudo-cysts the condition is the result of blood or pancreatic juice in the lesser peritoneal cavity and the onset is suggestive of acute pancreatitis, followed by a period of relative freedom of symptoms; then a fluctuating tumor rapidly appears in the epigastrium. In general, it may be said that the outstanding finding in cystic disease of the pancreas is a progressive increase in size of the abdomen with a tumor. This tumor causes a protrusion of the abdomen most frequently in the left hypochondrium and there is a respiratory mobility if the cyst is in contact with the diaphragm. In size it varies markedly, sometimes filling the abdomen, though an average might be slated as of some four inches in diameter. They grow slowly, as a rule, and are rarely multiple. When felt the cyst is smooth and fluctuation is common, though the sac may be so tense that impression of a tumor is given. It usually contacts the abdominal wall between the stomach and transverse colon; when the stomach is of the long fish-hook type or if ptosed, the cyst appears above it; it rarely appears below the colon and small cysts may lie wholly behind the stomach. When it arises from the tail it is found in the left hypochondrium. If the cyst is in contact with the abdominal aorta a definite bruit may be heard and pulsation may be transmitted, giving the impression of an aneurism. The confusion may be avoided by examining the patient in the knee-chest position. The site or origin of the cyst determines its direction of growth. It may appear between the stomach and liver, it may appear in either lumbar region or burrow between the mesenteric layers. The percussion note over the cyst is flat at its center; it may shade off to a modified tympany at its margins. The location of the cyst may be facilitated by inflation of the stomach and colon. The value of an x-ray study varies, but is generally helpful. The cyst may rapidly disappear by rupture into the bowel in association with a diarrhoea. A pancreatic cyst may be punctured for diagnostic purposes. When recent the fluid should be alkaline, a specific gravity of 1010-1020, hemorrhagic character and possessed of the property of digesting egg albumin and containing amylitic and fat-splitting ferments. If old the ferments may have disappeared, leaving albumin, blood pigment, cholesterin, uric acid and urates. While very interesting from a diagnostic point of view, I would counsel against study of this nature. The most important complications are hemorrhage, perforation and thrombosis. Malignant degeneration may occur and cystic degeneration of a malignant neoplasm may also occur.

A differential diagnosis must embrace: Cysts of liver, spleen, mesentery, omental, ovarian, kidney and suprarenal gland, diastasis of recti with herniation of stomach or colon, gall bladder disease, tumors of abdominal wall, encapsulated ascites and retroperitoneal sarcoma.

### Pancreatic Calculi

Stones in the pancreatic duct are rare autopsy findings. Barron found three cases in 3,437 post mortems; Krelz only one in 3,000, Simmonds found one in 2,000, while Kemp says two were found in 1,500 at the Johns Hopkins Hospital. The number of stones vary from one to one hundred and they weigh as much as 20 ounces. Sometimes the ducts are lined with calcareous material. They may, usually, be detected by x-ray study, being more opaque than gall stones. They are often found at autopsy in persons with no history of symptoms. Cysts and abscesses are rare.

Symptoms resemble gall stone colic. Kinnicutt thinks glycosuria occurs commonly and is of diagnostic import. The pain may be inconstant and vary in degree, sometimes vague or agonizing, with nausea and vomiting. The attacks bear no relationship to meals. It has been stated that the pain is due to the attempted egress of the stone through the duct. I doubt the accuracy of this explanation. It is a pain that is not relieved by ordinary doses of morphine comparable to gall stone colic. Biliary colic appears to be the result of muscle spasm, hence morphine relieves the pain; in pancreatic colic the pain is more likely the result of distention and inflammation of the ducts, as well as to pressure on nerve ganglia. It also differs from gall stone colic in the absence of jaundice unless the stone becomes lodged in the ampulla of Vater and then it is short-lived. The pain, sudden in onset, more or less paroxysmal, is felt along the left costal margin and, radiates to the back on the left side.

Lazarus found nearly 50 per cent of diabetes associated with stone in 80 cases studied. Fussell thinks calculus may exist without symptoms or may give rise to intermittent colicky attacks or peptic ulcer symptoms. If the duct is occluded the usual symptoms of pancreatic disease will appear, wasting, fatty stools, etc. Chills and fever are not uncommon during passage of stone; a soreness may be noted for several days after the attack. Such attacks differ from Charcot's fever in that they are not accompanied by jaundice. When a jaundice is accompanied by an enlarged gall bladder, it

is more likely due to pancreatic disease. It recalls the old "Courvoisier's Law," which stated that jaundice and a contracted gall bladder suggests gall stones, while jaundice with a dilated gall bladder suggests obstruction from some other cause.

The relation of food to the discomfort, the absence of agonizing attacks of pain, occult blood in gastric contents, hyperchlorhydria and the chronicity and periodicity help to exclude peptic ulcer.

The wasting and emaciation of cancer of the stomach or of the biliary tract may strongly resemble pancreatic calculus with prolonged exclusion of the pancreatic juice, but blood in the stomach in the former and in duodenal contents in the latter help to differentiate, while the stools in pancreatic duct occlusion is almost pathognomic. It must be differentiated from: Pylorospasm, peptic ulcer, gall stone colic, intestinal obstruction, lead colic, inflammation of a retrocelic appendix, mesenteric thrombus, visceral crises, angina, coronary occlusion and angio-neurotic edema.

### Roentgenological Study

The literature on Roentgenological study in acute pancreatitis is not extensive and the actual study of this condition is no doubt even less so. The acuteness and severity of the condition, accompanied as it is by gastric intolerance, makes the study with contrast media difficult. In a study without contrast media the most helpful finding will consist in a fairly definite shading in the epigastric region. This shadow when obtained represents the pancreas, its intensity will vary, but usually is about the same density as normal liver shadows. It is sometimes safer to inflate the stomach and perhaps the duodenum with air than it is to obtain retention of even small barium meals. When inflation can be used the pancreas shadow may be made more distinct and irregularities of stomach contour may be diagnostically helpful. Distention of the entire colon, which has virtually the same effect as a pneumo-peritoneum, is frequently found. Diaphragm mobility is diminished or arrested on the left side. When a contrast meal can be given the stomach is usually found displaced and on the side next to the tumor the mucous membrane presents a coarse rigid relief. The duodenum presents a wide arc and not infrequently gives the appearance of being stenosed and is often atonic.

Harrnheiser in a paper read before the twelfth Roentgenological Congress reported his observations of methods for the demonstration of an acute pancreas and in addition to the above findings stated that he had observed dilatation of the ampulla of Vater, had been able to demonstrate gastric and duodenal ulcers penetrating into the pancreas and visualized abscesses filled with gases.

Bronner in 1928 emphasized the following characteristics as typical: (1) An upward pressure of the stomach and transverse portion of the bulbus; (2) A large C-shaped duodenal loop; (3) accumulation and stasis of large masses of contrast media in the descending portion of the duodenum; (4) a transparency corresponding to the duodenojejunal flexure. In the same year Hulton stressed the vagueness of the left psoas as a new symptom in pancreatitis.

Naegli in reporting his experience concludes that stasis of contrast media in the duodenum, transparency of the duodenojejunal flexure and a large C-shaped duodenal loop, should not be regarded as characteristic of an acute enlargement of the pancreas, and concludes that a limited significance should be attributed to the x-ray picture in acute pancreatitis.

In the study of the chronic disease of the pancreas x-ray films are usually definitely helpful. In these conditions contrast media can be used and the displacement of neighboring organs, the visualization of pancreatic shadows, can usually be helpfully demonstrated. Of particular interest is the study of pancreatic cysts. The cystic contents are usually sufficiently radio-opaque to demonstrate interpretive shadows. Not infrequently knowledge of the origin of the cyst can be obtained by observing its relationships to adjoining structures, such as the stomach and transverse colon. By the use of contrast media, by demonstrating a normal kidney, pelvis and ureter, renal tumors are excluded. In the same manner the gall bladder may be visualized or its failure of visualization determined.

Troup has reported visualization not only of the biliary tract, but of the pancreatic ducts as well, by the injection of sodium iodide through a drainage tube anchored in the stump of a recently removed gall bladder. The patient experienced no undue effects and complete recovery was noted.

### Laboratory Investigation

Introductory: The failure to find laboratory evidences of pancreatic dysfunction does not unfailingly exclude organic disease of the pancreas. Since several methods of approach are now available, it would appear, however, that such failure should be relatively infrequent. A clear conception of such study must presuppose an intimate acquaintance with the physiological horizon of pancreatic function. In pancreatic sufficiency carbohydrate metabolism is begun in the duodenum, where both boiled and unboiled starches are subjected to enzyme activity;

proteins are reduced to amino-acids and neutral fats are converted into soaps, fatty acids and glycerine. Any retardation or deficiency in these digestive processes would argue either functional or organic disease of the pancreas.

Transduodenal Drainage for Purpose of Direct Study of Pancreatic Juice: The older and more uncertain procedure of Volhard, which consisted of introducing an oil into the stomach for the purpose of inducing a regurgitation of duodenal contents, has been superseded by Einhorn's intubation or some modification. By this means the duodenal contents are obtained and subjected to laboratory examination for pancreatic ferments. The amount of external secretion of the pancreas varies from 500 to 800 c. c. each twenty-four hours. Not only is the amount subject to dietary variation, but its composition as well. The largest amount is produced by a bread meal often, less by a meat diet and least by fats. An unusual opportunity for study of the human pancreatic juice before entrance into the duodenum was afforded Kahn and Klein on a patient with a pancreatic cyst, drained by Berg in the Mount Sinai Hospital. They found the secretion was continuous, though accelerated by food some 20 to 50 minutes after its ingestion; there was no apparent "psychic secretion;" it had a specific gravity of 1005, a pH of 8.2, was opalescent in color and had a very disagreeable odor. It did not digest the tissues of the abdominal wall despite leakage. This is due to failure to activate the trypsin with enterokinase. No constancy in ratio between trypsin, amylase and lipase was observed. Lipase constituted the larger proportion. Unfortunately more than one enzyme must be estimated, as the absence of one does not necessarily imply absence of all. Amylase, lipase and protease are estimated and the findings furnish a measure of pancreatic external secretory function activity. It is obviously difficult to estimate the degree of secretory function in terms of quantity by this method, since the pancreatic juice thus obtained is mixed with gastric juice, bile and duodenal juice. The drainage should be done on an empty stomach. The injection of ether, hydrochloric acid, cream, peptone or bouillon through the tube after it reaches the duodenum is effective in stimulating pancreatic secretion. Too rapid injection or using too large an amount of ether may result in recovery of traces of blood in the drainage, as well as a systemic response consisting of heart hurry, nausea and vomiting. Some fifteen minutes after the introduction of the stimulating reagent aspiration is begun and the first specimen is discarded; the drainage is continued over a period of twenty minutes. The amount of pancreatic juice will be small in tumor of the head of the gland, an obstruction due to a calculus in the duct, cysts, hemorrhage or if there is a diffuse sclerosis of the gland. The tip of the tube should be near the ampulla of Vater to avoid intestinal secretion dilution. Estimation of Amylase is not made by some clinicians, since ptyalin cannot be differentiated from Amylase. Singularly, there is usually an increase in pancreatic juice in achylia gastrica, while the same phenomenon is noted in peptic ulcer with hyperchlorhydria. It has been argued that ether should not be used because it is not a physiological stimulant. It is thought that the drug merely increases pathological deviations, but does not alter them. 100 c. c. of Witte peptone, 5 per cent solution, may be used instead of either hydrochloric acid or ether. Drainage is begun in five minutes when peptone is used and the first fraction is selected for the test under the belief that a larger portion of the pancreatic juice is thus secured by sudden liberation.

The simultaneous fractional analysis of duodenal and gastric contents may be done. The peak of pancreatic secretion is reached about two hours after the gastric test meal is given. This method has little to recommend it since the simultaneous introduction of two tubes would seem more objectionable to the patient than would two separate studies. A double tube has been devised for the simultaneous study, but the mechanical difficulties are obvious.

It would appear that a most rational approach to a study of the external secretion of the pancreas is by a quantitative estimation of the ferments found in the duodenal fractions. The degree of enzyme activity is a dependable index to the organic condition of the pancreas. This statement is subject to the qualification that the enzymatic activity estimation is not confined to short periods, for the study should be spread over at least a three-hour period to obtain consistent results. The degree of amylase activity of the duodenal contents may be measured in terms of units, based on the Wohlgemuth technique, while lipase is demonstrated by the method of Rona and given as the difference in the number of drops. The enzymatic activity of the duodenal contents for a three-hour period of study is 500 units for trypsin and 600 units for amylase and lipase. A reduction of that activity means organic disease of the pancreas, usually, for only rarely is such reduction caused by advanced organic disease elsewhere. It must be remembered that the absorption of fats and albumoses from the intestine is a process distinct from even the presence or absence

of enzyme activity of the pancreas. The degree of absorption is a measure of the functional activity of the pancreas, not of its organic state. When there is a total absence of pancreatic enzymes in the duodenal juice, it would appear rational to conclude that obstruction of the ducts or disease of the gland were present.

Since gastric acidity is known to be normally controlled by the regurgitation of duodenal contents into the stomach, an inquiry into the problem of what constituent of the duodenal contents furnishes the alkalinity is pertinent. Since Boldyreff first suggested that gastric acidity was controlled by regurgitation of pancreatic secretion a number of workers have studied the problem and confirmed its accuracy. Bennett and Dodge widened the concept of this mechanism by showing that there was an increase in the $CO_2$ alveolar air tension during the gastric phase of digestion and a decrease during the pancreatic period. Tests have shown that one of the most important functions of the pancreas is its alkali-splitting power. The rate of neutralization of gastric acidity serves as a rough index to the rate of production of pancreatic juice. Such a test gives no more complete information of the activity of the pancreas than do tests of enzymes, but is a valuable confirmatory procedure.

Estimation of Pancreatic Enzymes in Feces: It was taught, not so very long ago that the proteolytic activity in the feces was due to the presence of bacteria. It is now known to be due to tryptic activity. Trypsin appears in meconium soon after birth and is found normally in the feces throughout life. This activity is uninfluenced, apparently, by the diet or by variation in gastric juice acidity. It is increased by diarrhoeas or any condition hindering absorption from the bowel and by the same odds is diminished in constipation. On account of the presence of an anti-ferment in the blood serum no proteolytic enzyme can be demonstrated in feces containing gross blood. Neither is it found in cancer involving the head of the pancreas. To a lesser degree will cirrhosis of the pancreas interfere with proteolytic activity of the feces. It is true that erepsin is present in duodenal contents and that it has peptone-splitting properties, but it is of little practical import as the tests are made. A low trypsin index, if persistent, has a bad prognostic significance.

Amylase, also, is found in the feces of the infant during the first week of life. The amount is increased by diarrhoea and intestinal hemorrhage and is lessened by constipation and cancer of the pancreas. In achylia gastrica the amylase index is usually normal. A gastric hemorrhage with absence of hydrochloric acid will increase the amylase index; when one finds a bloody stool, a high amylase index and hydrochloric acid in the stomach, it may be reasonably certain that the hemorrhage is not of gastric ulcer origin.

It is thought that an estimation of lipase in the feces is of no diagnostic value in pancreatic disease. A fat-splitting ferment has been recovered from the intestinal mucosa and it is yet believed by some observers that bacterial activity is another source.

The diminution or absence of protease and amylase has introduced two terms into pancreatic literature, azotorrhea and steatorrhea. The former denotes excessive loss of protein compounds by the feces. The determination of such loss does not necessarily imply pancreatic deficiency, since a lessened rate of absorption of digested protein substances would result in excess loss by the stool as well. However, in pancreatic disease there is an increased nitrogen loss. This may reach as high as 40 per cent, a significant figure when it is remembered that the normal loss is from 5 to 10 per cent. Pancreatic disease is responsible for most of the cases of azotorrhea and where an intestinal disease which would impair absorption can be excluded pancreatic disease is likely whenever the nitrogen loss exceeds 30 per cent. It is a matter of no great moment to the clinician, since the determination of the nitrogen content of feces is not an ordinary laboratory procedure and, further, it is of no great value unless estimations of nitrogen intake are made also.

The other term, steatorrhea, indicates an increased neutral fat content in the feces above normal. In health from 20 to 30 per cent of the total fecal fat consists of neutral or unsplit fat. In diseases of the pancreas with diminished external secretion output the per cent may rise to 60 or 70 per cent. Muller found the proportion of split fat was always decreased, averaging about 40 per cent of the total fat. Katz, even more emphatic, says that a diminution of the split fat below 70 per cent of total fat content of the feces means pancreatic disease except in severe diarrhoeas and in nursing infants. The statement that in pancreatic disease the neutral fecal fat rises higher than in any other disease can be confidently made. Tests for neutral fat are based on the principle that palmin, a neutral fat, is always free of fatty acids and is split up only by pancreatic lipase. On the other hand, it must be stated that the relation between the split and unsplit fats in diseases of the pancreas may be disturbed by such accompanying factors as biliary disease and pathological states of the intestinal mucosa. In both of these conditions the percentage of combined fatty acids

in the stools is increased, and this is all the more important when it is recalled that simple, uncomplicated cases of either biliary, intestinal or pancreatic disease are relatively rare.

The determination of a creatorrhea is relatively easy. The inspection of the feces reveals numerous small red dots, which on detailed study will be found to be muscle fibers, transversely and longitudinally striated. If a normal stool is examined under the microscope, one seldom finds more than one or two muscle fibers in a field. If the patient's meat ration has not exceeded two ounces daily for a few days, the finding of muscle fibers is fairly dependable evidence of pancreatic disease.

Cell Nuclei Test: Pure pancreatic juice completely dissolves cell nuclei in less than eight hours. They are not dissolved at all by gastric juice or succus entericus (curepsin). Raw beef hardened in alcohol was used originally for the test, but the substitution of thymus has been a distinct improvement. The value of this test is lessened by the fact that in most cases of pancreas disease some function is preserved and, further, that Atchley has apparently demonstrated that conversion of nucleo-proteins into purins may occur in the absence of both bile and pancreatic juice.

Pancreatic Ferments in the Blood

In health absorption of pancreatic ferments obtains and to only a fairly constant degree. After ligation of the ends and inflammation or necrosis of the gland, absorption is materially increased. Since diseases of the pancreas manifest themselves predominantly in alteration of production and delivery of its ferments and hormone, interest must attach to methods of determination.

The endocrine hormone, insulin, passes directly into the blood and the determination of its presence and activity is based on blood sugar findings. Its reduction or absence means diabetes of varying grades, the symptoms of which are well known and will not be given consideration in this discussion. Its presence means damage to the islets only.

The ferments, on the other hand, are of importance not only because of alterations in amounts secreted, but in delivery as well. Hence, conditions mechanically limiting or preventing the flow of pancreatic juice into the bowel, whether in the pancreas or other structures, hemorrhages, inflammation and necrosis become subjects of inquiry.

Blood Serum Amylase: In 1833 Payen and Persoz found a starch-splitting substance in malt and named it diastase. Magendie demonstrated that the blood contained a diastatic substance that split starches in sugars in 1846. The substance will be referred to in the following discussion as Amylase. Wohlgemuth perfected a method that measured the amounts of amylase in the blood in 1908. Elman in 1927 reported studies in a series of patients with no pancreatic disease showing the amylase was fairly uniform. Similar studies in cases with demonstrated pancreatic disease showed the blood amylase well above normal.

Wakefield et al in 1929 reported their observations on a series of 30 cases with pancreatic tumors, finding blood amylase increased in 6 and normal in 14, while in a group of 30 having no pancreatic disease there were two with increased blood amylase and 28 with normal values. They concluded that a study of the blood amylase as a routine diagnostic procedure was not warranted. Wolfer and Christian reached the same conclusion unless the necrosis reached a degree of pancreas destruction which overcomes the "safety factor" normally present.

In a series of studies on normal humans Pollaco and Pecco found blood amylase to range from 2 to 16 units. Transferring their study to clinical material, they found that in 32 per cent of peptic ulcers and in 42 per cent of gall bladder disease with stones a definite increase in blood amylase was found. This was attributed to the secondary injury to the pancreas, in other words, a chronic pancreatitis. In four cases of stone in the common duct the amylase was 64 units in one with a normal pancreas, 128 in another with edema, 512 in two cases of acute necrosis of the pancreas. A chronic pancreatitis as demonstrated by serum amylase studies may not be recognizable microscopically at operation; only histological examination may reveal the changes structurally. Jorns in 1931 concluded that absorption of pancreatic ferments into the blood occurred in an insignificant degree in health, but that in certain diseases of the pancreas a significant absorption took place. He explained the relatively larger absorption of amylase than protease and lipase by the fact that the former is found in pure pancreas juice in active form only, while the last two are excreted in an inactive state.

Absorption of diastase occurs in all conditions where the free flow in normal directions is hindered. The degree of obstruction determines the degree of absorption. During the first few days of complete obstruction the amylase content of the blood rises rapidly and then as rapidly falls to or below normal levels. This is believed to be due to a limitation of the processes associated with the production of the ferment. Such cessation of ferment formation is the first sign of damage to secreting cells. Zucher et al conclude from their studies that blood serum

amylase is derived from pancreas activity only. Yet amylase ferment is a product of other secretory organs' activity, the tonsils for example, and other large amounts of amylase are introduced into the small bowel through the swallowing of saliva. These observers, however, seem to have shown that the ferment is not absorbable from the bowel in this form. If other observers confirm these conclusions, the evaluation of serum amylase as a criterion of pancreatic disease is materially strengthened. Pursuing their thought further they conclude that serum amylase levels can be changed by several conditions affecting the pancreas, but depend in the last analysis on action through but one of the two mechanisms of external secretion. This mechanism concerns the transfer of the ferment from the pancreas to the bowel. This latter opinion has not been clearly justified, since in experimental acute pancreatic necrosis after the initial rise in serum amylase there occurs a rapid fall which would seem to be due to exhaustion or death of pancreatic cells and not on transportation alone. Amylase is rapidly absorbed into the blood following even slight congestion in the duct system or early necrosis. Just as rapidly will the formation of the ferment fall. Such fall after congestion or necrosis means that the ferment already formed has been destroyed and that no new ferment is being formed. In early acute necrosis the amylase is increased in the blood, while in severe or advanced necrosis the serum amylase is marked by decrease. In autolytic decomposition the rise of serum amylase is even more rapid, but is of shorter duration than in acute necrosis and the decrease is more pronounced.

The figures found by Jorn in experimental work is illustrative of the above statements.

In congestion of pancreatic tissues the ferment activity expressed in Wolhgemuth units was as follows:

| | |
|---|---|
| Unchanged tissue | 5,120 |
| Congestion (after 24 hours) | 163,840 |
| Indurated tissue (after 7 days) | 640 |

In Acute Necrosis

| | |
|---|---|
| Unchanged tissue | 40,960 |
| Slight necrosis | 163,480 |
| Severe necrosis | 20,480 |

In Autolytic Decomposition

| | |
|---|---|
| Unchanged tissue | 20,480 |
| Transplant, 10 hours | 81,920 |
| Transplant, 24 hours, | 2,560 |
| Transplant, 48 hours, | 0 |

Jorns also reports studies made on 22 patients suffering from acute pancreatic necrosis before and after operation. The clinical findings corresponded fairly closely to his experimental studies just quoted.

Most authors have found low or normal values in chronic pancreatic disease. Such lack of increased blood serum amylase must be interpreted, I think, as the result of exhaustion or death of pancreatic cells. On the whole the value of serum amylase determinations in chronic pancreatitis is small. But regardless of the exact mechanism involved, it remains a clinical fact that serum amylase levels are increased by obstruction of ductal orifices, trauma, necrosis, inflammation and some chemicals, including ether. During the period which marked the rise of the Ether Empire and the fall of the Chloroform Dynasty one recalls the oft repeated assertion that chloroform damaged liver cells. In the light of our growing information concerning pancreatic disturbances and disease one's complacency in "ether safety" may come to be disturbed. Any way, after excision of the pancreas the serum amylase falls to less than 50 per cent and does not rise.

Blood Serum Lipase: The other ferment found in the blood having diagnostic value is lipase. In attempting to determine the value of its occurrence one must inquire how much lipase so found is the result of absorption from secretion and how much is derived from necrosis of cells. Another factor that operates to make lipase determination less valuable than amylase is that the former is easily destroyed. Experimental work indicates that in induced congestions no helpful change occurs; the same is true of transplants undergoing autolytic decomposition, but in necrosis a more definite increase in serum lipase occured. These findings may be interpreted as meaning that only with cellular destruction is any considerable amount of lipase liberated, hence absorbed. Lipase differs from amylase very definitely, then, from a clinical evaluation. Amylase is rapidly absorbed following congestion and early necrosis, causing a steep rise in serum amylase and just as rapidly subsides. Lipase, on the other hand, appears in much increased amounts only after extensive or prolonged tissue destruction. In other words, serum amylase determination is more valuable in acute or early pancreatic disease, while serum lipase persists after serum amylase falls and is, therefore, more helpful in the study of chronic pancreatic disease.

Jorn's experiments showed lipase determinations as follows:

| | |
|---|---|
| Unchanged tissue | 4 |
| Congestion (24 hours) | 5 |
| Indurated tissue (7 days) | 22 |

He concluded that "severe pancreatic necrosis was found to be always associated with a striking increase in lipase values."

The experimental findings seem to have been rather closely paralleled by clinical studies. Its determination is of no value early in acute pancreatitis, but in the later

stages or in chronic pancreatitis it seems to have some diagnostic value.

### Pancreatic Ferments in Urine

Amylase: Amylase is present in urine of healthy persons in fairly definite quantities ranging from 6 to 8 units. It varies in amount during the day due to food intake. It is of pancreatic origin, having been absorbed directly by the blood and carried to the kidney. The amount is lessened by kidney disease if that disease lessens the permeability of the renal cells. It is also lessened in diabetes mellitus, primary and secondary anemia and Basedow's disease. It is increased in pancreatic disease and injury, or by pressure on the duct of Wirsung by cancer, gall stones or adenopathies. The highest values are found in acute pancreatitis. Whatever increases serum amylase likewise increases urine amylase. The Cammidge reaction depends upon the pressure of pentose. The pancreas has about five times as much pentose as any other organ and the reaction is more constant in active degenerative changes in the pancreas than when similar changes occur in other organs. The clinical value of the test has been the subject of no little discussion. The amylotic power of the kidney is about twice that of the blood serum. In injury resulting in the outflow of the pancreatic juice into the abdominal cavity the urine amylase rises as a consequence of increased absorption. Likewise, in the post-operative care of pancreatic necrosis a rise in urine amylase follows removal of a tampon. In such a case the increase in urine amylase may not be the harbinger of further necrosis, but the result of inflammation or mechanical blocking. Therefore, being an evidence of functioning capacity of the pancreas, it may sometimes be a good prognostic sign.

Lipase: Lipase is only occasionally found in the urine, but when found it furnishes presumptive evidence of acute pancreatitis with necrosis. In such a condition it is apparently absorbed from the peritoneal cavity.

### The Adrenalin Test

When twenty-five years ago Loewi made the observation that mydriasis occurred uniformly in animals following the removal of the pancreas and that it did not occur when the external secretion was diverted through a fistula externally, he reasoned that the pupillary dilatation was due to failure of the internal secretion of the pancreas; that this internal secretion carried a substance acting as an inhibition of the sympathetic nervous system. Hence when mydriasis occurred in a patient under the local action of adrenalin, pancreatic activity was impaired or lost. In his first series of 8 cases so tested he found that more than one-half the diabetics and all the cases of Basedow's disease showed mydriasis.

Decker in a larger series found the reaction in some not having and in some known to have pancreatic disease. Similar observations have been frequently reported since that time and it may be stated now that the test is certainly not pathognomic and is of even doubtful value. Chamberlain thinks the test is valuable, while Cockcroft doubts its dependability.

## SURGERY OF THE PANCREAS*

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Louisville.

Within the time limit imposed by the society it is obvious that only the most important phases of the surgical lesions of the pancreas can be considered. Injuries, acute and chronic pancreatitis, cysts and tumors constitute the group in which the application of surgical treatment offers the hope of palliative or curative relief.

The injuries of the pancreas may be subcutaneous and percutaneous; the situation of the organ renders both types relatively rare, while the danger in both lies in hemorrhage and in the activation of trypsinogen with a resulting pancreatic necrosis from autolysis. In the subcutaneous type the diagnosis is rarely possible except upon the operating table; the presence of severe epigastric pain, dyspnoea, nausea and vomiting with epigastric tenderness and rigidity following a serious injury is universally recognized as urgently indicating exploration, when te injury to the organ will be apparent. The indications are to control hemorrhage, prevent leakage of pancreatic juice into the peritoneal cavity, and to provide drainage. In penetrating wounds of the abdomen the common practice of exploration will again be the means of recognizing injury of the organ and the application of appropriate treatment. Unfortunately there are, as a rule, associated injuries of adjacent viscera, a combination which results in a high mortality. In the two instances of pancreatic injury which have come under our observation such a combination existed with a fatal issue in both. Comparatively mild injuries, unrecognized and consequently not subjected to operation, may give rise to cyst formation in the pancreas or to the development of a pseudo cyst, the accumulation being in the lesser peritoneal cavity. In all injuries fibrosis with subsequent interference in pancreatic function may be a late result. Pancreatitis is commonly divided into two clinical groups, the acute and chronic. The acute group comprises

*Read before the Jefferson County Medical Society.

pancreatic oedema, pancreatic necrosis, hemorrhagic pancreatitis and pancreatic abscess. In the light of our present knowledge all depend upon the same etiological factors and but represent varying degrees of intensity of the same underlying pathological phenomena. The most logical explanation for its origination, both from clinical observation and laboratory experimentation, is the retrograde injection of bile or duodenal contents through the ducts of Wirsung and Santorini. Biliary tract infections have been present in more than 50 per cent of the reported cases. The lymphatics draining the gall bladder and bile ducts are in intimate association with the lymphatics of the head of the pancreas before they join the aortic group. It is believed by some that infection following this path readily enters the head of the pancreas where resultant inflammation and minute hemorrhages may readily activate the pancreatic ferment. It has been proved that normal bile salts induce pancreatic necrosis and that this action is greatly intensified when the bile shows bacterial contamination. This destructive action on the pancreatic cells is greatly augmented by the activation of trypsinogen within the gland itself: normally this is done by the enterokinase in the duodenum but bile, bacteria and their toxins and the calcium of effused blood are also capable of inciting its activity. When this occurs within the gland the powerful digestant action of the ferment upon the blood vessels of the pancreas doubtless in part explain the marked hemorrhagic deposit and in part the pancreatic necrosis while the absorption of the toxic proteoses, chiefly histamine, resulting from its action on the necrotic pancreatic cells is in large measure responsible for the shock and early toxic manifestations. The areas of fat necrosis commonly seen in the peritoneum, root of mesentery, mesocolon and omentum are due to the action of the steapsin or lipase in the escaped pancreatic secretion upon the fat molecule, breaking it up into its component glycerine and fatty acids, the latter uniting with the calcium. Cases reported in which such areas have been observed in the pericardial and extrapleural fat would indicate that these ferments are capable of transportation by lymph or blood stream. There are no pathognomonic symptoms; the wide variations in the severity of the disease permit a corresponding variation in the intensity of the symptoms evinced by it. The physical signs will depend on the stage of the disease at which the patient is seen: in some cases the lack of symptoms and physical signs is remarkable when compared with the extent and severity of the local lesion, while in others the reverse obtains. Laboratory examinations are of but little aid in reaching a diagnosis; the leucocyte count may be normal or but moderately increased, high counts being unusual. Such blood findings are in harmony with the belief that the extensive destruction of pancreatic tissue is due to the action of the bile salts plus the activation of trysinogen rather than to actual bacterial attack. The blood sugar may show a rise after the first 24 hours, affording when present a confirmatory sign. The urine frequently shows albumin, occasionally bile, casts and microscopic blood. For diagnosis reliance must be placed chiefly upon the history of previous upper abdominal disease, the present symptoms and physical findings. Pain, vomiting and in the hyperacute cases, collapse are the most important of the former. Deep epigastric pain radiating from the right costal margin across the upper abdomen, tenderness following the course of the pancreas, pain and tenderness to the left of the midline and the detection of a mass in the pancreatic area are beacon lights when elicited. In the hyperacute cases the pain is agonizing, the remaining symptoms being those of profound shock, death not infrequently supervening before reaction occurs. Should reaction occur and also in the primarily less severe cases, the symptoms partake more of a toxic character due to the absorption of the split protein derivatives and the chemical irritation of the peritoneum. Granting the continued survival of the patient local signs often become apparent as a result of hemorrhagic infiltration or closure of the foramen of Winslow with the accumulation of fluid, serous, hemorrhagic or purulent in the lesser peritoneal sac. After all it is not so important to make a correct diagnosis of acute pancreatitis as it is to recognize the presence of an acute surgical lesion in the upper abdomen; the predominance of symptoms at and above the umbilicus will usually permit this localization when prompt operation will direct one to the pathology. The earlier the operation the less the destruction of the pancreas, the less the absorption of toxic proteoses, the less the peritonitis, and consequently the greater the number of recoveries. The indications are to relieve tension, to stop hemorrhage, to prevent leakage and to afford drainage; the fact that the pancreas has no proper capsule, being imbedded in loose retroperitoneal tissue and fat, permits rapid extension of hemorrhagic and inflammatory infiltration; the application of gauze tampons and tube drains in and around the focus of pancreatic destruction will best fulfill these indications.

Drainage of the gall bladder, when the condition of the patient allows, is a worthwhile procedure in promoting recovery and securing immunity from further attacks. As

ultimate results chronic pancreatitis, cyst formation and disturbance of glycogenic function are occasionally observed.

The type of chronic pancreatitis in which surgery offers help is that characterized by chronic inflammatory enlargement with induration. It is almost invariably associated with and dependent upon biliary tract infection. The symptoms at times are not to be distinguished from those of gall stone disease consisting of epigastric pain and reflex digestive disturbance. In others recurrent attacks of subacute pancreatitis with pain to the left of the midline and tenderness over the course of the organ point clearly to its involvement. The milder type is not uncommonly found in patients with long standing disease of the gall bladder and usually noted with long standing disease in the common duct. Not infrequently an ulcer perforating the posterior wall of the duodenum into the head of the pancreas originates such an inflammation. The head of the pancreas in such cases shows palpable increase in size and density and usually the correction of the lesion whether in the biliary tract or the duodenum suffices to bring about resolution.

In the more advanced cases the inflammatory enlargement of the pancreas is more extensive, involving the body as well as the head of the organ. With the occurrence of fibrosis dependent upon long standing inflammatory deposit the islands of Langerhans may be injured giving rise to disturbance in their glycogenic function. The formation of the external secretion suffers interference with resultant impairment of resistance due to faulty digestion and assimilation. In sixty per cent of all individuals the terminal portion of the common duct is entirely surrounded by pancreatic tissue; this anatomical arrangement allows compression obstruction when the pancreatic tissue surrounding the duct becomes markedly involved in the inflammatory process, giving rise to jaundice and further impairing the digestive process.

In the surgical treatment of chronic pancreatitis two indications exist, one to put the biliary tract in such condition that infected bile is no longer forced into the pancreatic duct, the other, to provide bile drainage over a period of time sufficiently long to give the swollen pancreas its best chance for resolution. The first indication implies the removal of stones with a thorough toilet of the gall bladder and common duct. There is some difference of opinion as to the disposition of the gall badder, one school arguing for its removal in the belief that compensatory dilatation of the common duct will afford adequate drainage, the other that it should be preserved for utilization as a drainage channel. The second indication means the employment of drainage over a period of weeks or months since it will require this length of time for the disappearance of the inflammatory deposit. External dramage of bile for such a long time is objectionable in that the bile is diverted from its physiological usage. When the size and condition of the gall blader permit its retention it has been our practice in such cases to make an anastomosis between it and the second portion of the duodenum or the anterior wall of the stomach as local conditions warrant, thus affording both adequate prolonged drainage and the retention of the bile for its physiological purpose. In the event the gall bladder has been previously removed or if present it is contracted or its walls so damaged that its continued presence constitutes a further menace, it has been our practice to remove it, in both instances draining the common duct with a T-tube, allowing the latter to remain for two to four months, according to the visible and palpable extent of pancreatic disease. When the patient's recovery has advance to the stage of being out of bed a stop cock is placed on the T-tube and intermittent substituted for continuous drainage. Resumption of ordinary occupation is allowed with drainage tube open at night and for one or two hours during the day. Such a regime supplies drainage for the requisite time while allowing the bile to flow into the intestine during the hours of active digestion.

Cysts of the pancreas, if we exclude the rare congenital, hydrated and dermoid types, are of four varieties:(1) Retention cysts which develop as a result of obstruction to a pancreatic duct or an acinus, commonly in the course of, or associated with, a chronic pancreatitis: (2) Proliferation cysts which are true tumors of the cystadenomatous type. They arise from a proliferation of the parenchymal cells plus a retention of their secretion. (3) Degeneration or hemorrhagic cysts which represent the softening and cystic transformation of destroyed pancreatic tissue whether from trauma or true pancreatic apoplexies. In the latter event the acute symptoms characteristic of the onset point rather clearly to the mode of origin. (4) Pseudocysts, which like the last named group, are due to trauma or pancreatic necrosis, differing only in location, consisting of an accumulation of fluid in the lesser peritoneal cavity. When the cyst attains sufficient size to be palpable, it appears as an elastic tumor above the stomach, behind the stomach, between the stomach and colon or betwen the layers of the transverse mesocolon. It may extend to the right or to the left of the midline and does not move with respiration. Pain, digestive disturbance and discomfort from pres-

sure on adjacent organs plus the presence of tumor are the cardinal symptoms. The diagnosis is to be made on the history, which, when revealing trauma or pancreatitis is particularly helpful, on the physical findings and the elimination of the gall bladder and gastro-intestinal tract by x-ray studies. Urinalysis and blood examinations show few departures from the normal. Exceptionally jaundice may be produced by pressure on the common bile duct and diabetes and glycosuria are noted if the main pancreatic duct becomes obstructed and there is subsequent involvement of the islands of Langernans. The treatment is definitely surgical, either excision or incision with marsupialization. The former is preferable where possible to carry out and absolutely essential for cure if the cyst arises in a papillary cystadenoma; in the simple and pseudo-cysts, incision, marsupialization and drainage is a much safer procedure and in the vast majority of cases eventually results in disappearance of the cyst and satisfactory closure of the drainage tract. In the few in which persistence of the discharge depends upon communication of the sinus with one or the larger pancreatic ducts the operation of dissecting out the fistulous tract and of implanting this tract into the stomach or small bowel is suggested.

Benign tumors of the pancreas are exceedingly rare and but few operations for removal have been reported. Archibald records 16 with recovery in all save one, though frequently complicated by long standing fistula. With the exception of one pedunculated tumor of the head, all were located in the body or tail of the organ, where anatomical relations and physiological considerations permit of readier attack then those encountered when the head is involved. The maligant tumors are practically always carcinomata and present in one of two clinical groups; one in which the head is the site of the growth when jaundice is the predominant symptom, and the other in which the growth is located in the body of the pancreas, when pain is the cardinal symptom. When the growth involves the head vague symptoms of "indigestion" are followed by jaundice, rapid loss of weight and progressive weakness due to cholemia and loss of pancreatic function in digestion. Ordinarily there is no evidence of disturbance of internal secretion, a sufficient amount of the organ remaining uninvolved to carry on sugar metabolism. Painless distension of the gall bladder due to common duct obstruction by the growth is a valuable confirmatory sign, although at times observed in chronic pancreatitis. In our experience, with the abdomen open, it has at times been difficult, at others impossible, to satisfactorily distinguish between carcinoma of the head and pancreatitis. In carcinoma of the head surgery offers but palliation; a union of the gall bladder with the stomach or duodenum brings relief from the intoleraable itching and grants a respite of life of some months duration in reasonable comfort. In our experience the most impressive symptom dependent upon carcinoma of the body and tail of the pancreas has been deep epigastric pain, most marked to the left of the midline, extending to the back below the angle of the left scapula. This with digestive disturbance and progresive emaciation, when other upper abdominal lesions can be ruled out, is strongly suggestive. A palpable tumor is present in but one third of the cases and is usually a late symptom. Surgical treatment offers little short of diagnostic confirmation. The fact that the body and tail of the pancreas have been successfully resected for benign tumors has led to the employment of this procedure in dealing with carcinoma in like situations but all reported cases have died sooner or later. The technical difficulties encountered in removing a malignant growth from the head of the pancreas are insuperable. In the light of our present knowledge the role of surgery in pancreatic malignancy is purely and simply palliative. One may well conclude with Archibald that "Our old friend with the scythe, provided he come without pain and quietly, lays his hand perhaps more gently upon the patient than does the surgeon who sees his ideal only in technique. The true function of the surgeon is sometimes rather to re eve pain than to save life."

## DISCUSSIONS

**Ellis S. Allen:** Acute hemorrhagic pancreatitis presents one of the most severe pathological catastrophies that confronts the surgeon upon opening the abdomen. Rarely is he prepared for it; rarely is the diagnosis made beforehand. He generally has in mind some pathological lesion more commonly found within the abdomen, such as perforated duodenal or gastric ulcer, acute appendicitis, acute cholecystitis, mesenteric thrombosis, ruptured ectopic pregnancy, etc. Rarely does he diagnose preoperatively an acute hemorrhagic pancreatitis.

This subject is of especial interest to me because I have had the fortune, or misfortune, to have had, during the past twelve months, three case of acute hemorrhagic pancreatitis, none of which was diagnosed preoperatively. Burke, in recording 118 cases, reports a correct diagnosis having been made before operation in 29. Other diagnoses were: acute perforated ulcer of the duodenum or stomach, 25; acute lues, 15; appendicitis, 15; acute obstruction of the bowel, 15. So rarely does the surgeon anticipate, nor

is he prepared for an acute hemorrhagic pancreatitis.

The surgical treatment of pancreatitis has not advanced in keeping with advances that have been made in methods of dealing with more common pathological lesions found within the abdomen. This is probably due to the fact that the surgical approach to the pancreas is more difficult because of the relation of the pancreas to other important structures. The extreme vascularity of the organ and the dispatch with which it is necessary to deal with the condition and get the patient off the table, leaves very little time for exploration or examination.

I think it is generally conceded by most of the investigators and surgeons quoted by the essayists that pancreatitis is usually the result of biliary infection; that we have a regurgitation of bile into the pancreatic duct which results in destruction of some of the cells and liberates some activating substances which converts trypsinogen into trypsin, and autolysis takes place with the development of an hemorrhagic condition. Another school, however, claims that it is due to transportation of infection from an infected gall bladder along the lymph channels into the pancreas, and this is supported by the fact that those who have operated for pancreatitis have observed that the lymph glands found along the cystic duct and along the common duct cross the pancreatic lymph channels. However, it has been demonstrated that bile mixed with histamins is not so destructive as a more concentrated bile, or bile from which the histamine has been filtered out; that normal bile salts did give rise to an acute hemorrhagic pancreatitis whereas bile mixed with histamine did not. Krans demonstrated conclusively that bile injected into the pancreatic duct will cause an acute pancreatitis with necrosis. They observed the condition taking place macroscopically by injecting bile into the pancreatic duct and then watching the development of an acute anaemic condition, followed rapidly by oedema and the formation of a hemorrhagic area right under their eyes. Examination of a section under the microscope confirmed the fact that necrosis or autolysis had taken place. Deaver and Feiffer also demonstrated that transportation of infection through the lymph channels may occur by injecting dye into the gall bladder and finding it deposited in the pancreas.

We believe, however, that acute hemorrhagic pancreatitis occurs most frequently as the result of regurgitation of infected bile into the pancreatic duct.

The question of differential diagnosis has been so thoroughly covered by the essayist as to leave very little to be said except in the way of emphasizing some of the more important points. Acute pain is the first symptom of pancreatitis, especially following a heavy meal when the pancreas is active from a secretory standpoint. My own opinion is that this is when acute pancreatic infection takes place, because injections of bile or toxic material into the pancreatic duct during a starvation period does not create autolysis. Probably the pain in acute pancreatitis can be attributed to swelling of the gland and the solar plexus getting what is referred to as neurogenic shock; then the development of a toxic product secondary to cell necrosis. At any rate, pain is the primary symptom in acute pancreatitis whereas in other abdominal conditions there are other symptoms, and a close study of the history of the case may clear up the diagnosis.

Surgical relief of acute hemorrhagic pancreatis has been covered in detail. We recognize the condition immediately upon opening the abdomen and finding it filled with a hemorrhagic fluid, with fat necrosis on the omentum and other structures. In the presence of such a condition, about all we can do is to drain and wash the avenues of approach, the gastrocolic omentum, the gastrohepatic omentum and the transverse mesocolon. In a case that I operated upon recently there was a gangrenous area in the mesocolon, which was dissected out and a tube placed into the pancreatic structure which was walled off with rubber tissue and cigarette drains placed. Some authorities advise multiple incision of the swollen pancreas, but this procedure does not meet the approval of the majority of operators because of the danger of uncontrollable hemorrhage and the measures necessary to deal with the hemorrhage would probably cause more destruction. Some advise, instead of draining the pancreas, to drain down to the pancreas. At any rate, about all that one can do in the presence of an acute pancreatitis is to drain. Some advise aspirating all the fluid out of the peritoneal cavity and others say this does more harm than good. Some advise placing drain in the pelvis to evacuate this excess fluid.

The great majority of these cases die; in the hyper-acute stage practically all of them die. In acute hemorrhagic pancreatitis the mortality in the best of hands ranges from 45 to 65 per cent. I had one case that lived for two months following operation for acute pancreatitis and then died as a result of general sloughing and infection. Another case that I had recently confirmed the view held by many operators that there is no increase in the blood sugar. This patient was watched very closely and the blood sugar ascertained every day to determine whether it was necessary to give insulin because we were administering glucose intravenously to help the general metabolism.

**Morris Flexner:** Considering the amount of work that the pancreas is called upon to do, it

is remarkable that the average person is perhaps less aware of its presence in the abdominal cavity than of any other organ. The pancreas goes on doing its work day after day—and a tremendous work it is—and yet the average man lives and dies without being conscious of its presence. We of the medical profession talk and think about pancreatic disease as if it were a matter of every-day occurrence, perhaps because it makes such a tremendous impression upon us when we do see it, but the truth of the matter is that diseases of the pancreas are relatively uncommon.

In recent years study of the pancreas has been largely directed towards consideration of the internal secretion with the result that the subject of the external secretions has been more or less neglected. Dr. Simpson has discussed most of the modern angles of the subject.

Duodenal drainage as practised in this country was largely pioneered by McClure, of Boston, and Silverman, of New Orleans. The procedure is not easy and it really takes an expert to make the determination; it is not a technique that can be carried out in the ordinary laboratory. The same is true of most of the other complicated physiological processes for determining pancreatic disease; they require expert technique and for that reason are not apt to be widely used for some years to come.

I have not heard any mention made tonight of a study of the stools as a source of information concerning possible pancreatic disease, yet it is, I believe, a procedure from which the average man can learn more than in any other way. Every medical student knows that fatty stools, and the presence of striated muscles in the stools constitute evidence of pancreatic disease. Adolphe Schmidt, who has written a book on the study of the stools in pancreatic disease, gives a simple three-day diet, during which time all stools are carefully collected, dried and weighed. There is a vast difference between the stools of the normal individual and one who has pancreatic disease. In normal individuals the total volume of stools thus collected and dried will average about 53 gms. while in those with pancreatic disease it will run as high as 400 to 500 gms.

The question why a person cannot live without the pancreas is an interesting as well as an important one. When we see a man in the prime of life come to the operating-table with a little tumor in the head of the pancreas it does seem that we ought to be able to do something to save that man's life. As Dr. Abell has pointed out, in the present state of our knowledge, surgery in the presence of pancreatic malignancy is simply palliative.

In discussing a symposium on the subject of pancreatic disease at the recent meeting of the Southern Medical Association in Birmingham, Dr. Evarts Graham, of St. Louis, reported nine cases that he had seen up to that time and his conclusions impressed me tremendously. I recall particularly his description of one case in a man who had been the chess champion of St. Louis. This man began having attacks which were diagnosed as epilepsy and in the course of time he reached a stage of almost complete mental deterioration. Finally, however, some one made a correct diagnosis and Dr. Graham operated upon him and found a large adenoma in front of the pancreas. These tumors are usually about the size of the rubber on a lead-pencil but this one was twice that large. It was removed and the man made a miraculous recovery. Within a short time, however, the attacks recurred and at a second operation another tumor was found on the under side of the pancreas. The moral pointed by this case is that we should always look on both sides of the pancreas because very frequently these tumors are multiple. Dr. Graham also made the interesting statement that our insane asylums contain many individuals who have nothing the matter with them except an adenoma of the pancreas.

## THE RELATIONSHIP OF INFANT MORTALITY TO PRENATAL CARE*

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Director Anderson County Health Department, Lawrenceburg.

In presenting a more or less technical subject to a mixed group of laymen and professional workers it is sometimes quite difficult to do it in such a manner that will interest both groups. Now the subject you have just heard the chairman announce is a remarkable one, a wonderful subject, and I only wish I could present it well enough to intrigue you as much as it does me.

It sometimes seems as if the layman has progressed farther in believing in preventive measures than the physician. The layman has been educated through the magazines, the press and the radio. He may also be putting too much stress or believing too strongly in preventive measures without recognizing that there are, nevertheless, certain limitations. On the other hand, there are so many preventive means that we doctors have known for years and yet a large majority of us have heretofore and even now are still passing by without attending to educate the people to the use of them. Why is it that there is still so much diphtheria every year when we have known for more than ten years the means of absolutely stamping it out? Why should there ever be a case of smallpox when we all know that vaccination prevents it? Why is there such a lack of sanitation particularly in rural areas? Now, to get closer to the subject, why are so many mothers and babies lost in or

*Delivered before the Kentucky Conference of Social Workers Berea, October 14th, 1933.

soon after childbirth? Physicians have long known that much of the morbidity and mortality could be prevented, yet the majority of us have waited until the public itself has asked for it when we should have been teaching all these preventive measures ourselves. The profession has largely been pushed into it and this meeting today is evidence that the public is seeking such knowledge, and each of us will carry home many ideas that we will in turn put before some one else.

Perhaps, after all, it is the best thing that our people themselves should be asking for preventive means because our own medical ethics have more or less hampered the ideals of preventive medicine. Dr. Crile, a few months ago, made the statement that, twenty-five years hence the layman will know as much preventive medicine as the average practitioner of medicine does today. That may or may not be correct, but when a man like Dr. Crile makes that statement it does show, at least, the trend of medical thought. The public is being taught today that there is nothing miraculous about medical treatment, and that the more kowledge the public has the easier it is for the physician to get results. It has been said that there has been something wrong with our school curricula in that too little attention has been paid to the teaching of health. Health and the prevention of disease should occupy a most important place in the schools because there is too much waste in educating an individual whose body is riddled with diseases that could have been prevented if the parents had had the proper knowledge. Anyhow, we are all agreed that prevention is so much easier and so much safer than cure and that every effort should be made to prevent those preventible diseases that cause so much suffering and loss to the human race. Permit me to mention the most important point of attack. The first, the greatest, and the most neglected line of attack is maternal and infant mortality.

It is not sectional or racial, but involves a front as broad as, from ocean to ocean, and from pole to pole, and the surface has barely been touched. Why are there so many mothers lost from causes relating to childbirth? It is the old, old story, we have failed to educate the expectant mother to demand and to expect prenatal care of her family physician. The percentage of expectant mothers receiving adequate care is so small that it should not be mentioned at all. Yet, the results from it can be more accurately appraised than in most other phases of medical care.

For many years, obstetricians and better class physicians have attempted to regulate the health habits and to have medical supervision of the expectant mother as well as to educate her to the necessity for medical care at this time. But since the majority of obstetricians and better class physicians have lived in the cities it leaves a great mass of people who have been without this educational teaching. The nursing services in the cities have been great agencies for putting this idea over, but it is only recently that many counties have had the advantage of any kind of nursing service, and it is still true that a large number of rural women never see their physician until the time of delivery. The busy country doctor has so many duties of an active practice to attend to that he has not had the time nor has known how to educate his clientele to the point where it demands prenatal care. Also, he has officiated at so many deliveries of patients whom he has not seen before with such perfect endings that he is apt to lose sight of those comparative few cases that are lost each year as the result of neglected prenatal attention. When these few cases from each physician's practice are totalled the figures are very high. Yet, on the other hand, many women having no care at all or even knowing that they should have, go through pregnancy successfully. This simply means that we cannot pick out those cases that will have trouble unless every pregnant woman is given this care routinely, but she must be taught to demand it, and every social worker should take the time whenever contacting a pregnant woman to tell her how important it is to see her doctor regularly. It has been mighty hard heretofore for the doctor himself to advise this care for fear that his clientele would think he was soliciting business.

We have been extremely proud of the progress we have made in many lines of endeavor, but still we have been content to lose thousands of mothers each year many of whom could have been saved if they had had adequate prenatal care. Why does this occur and re-occur each year in a so-called intelligent civilization. The reasons are, a lack of attention and education and the medical profession needs your help to put the idea across.

This discussion could be carried on at great length and it would probably mean very little except a flow of words whereas if some definite example is brought forward it might serve to make the subject more interesting. While personal experiences are not to be expected in a gathering of this kind, I rather think I can best illustrate the value of prenatal care with a few facts and figures. In the first place, let me say, I am not an expert. I am only an ordinary worker. I can lay no claim to being an authority, and these figures are only my own observations.

You know all figures and experiments are simply the observations of the investigator

and the larger the field of investigation the larger the number of figures. Yet, if accurately done and recorded, the small number may be just as representative as the larger number; still, there is always danger of error in statistics of small numbers. Any way, what I am trying to say is that the figures that I am about to give you cover a very small field, but I give them to you for what they are worth.

In our county we really try to educate the expectant mother to the importance of prenatal care. We have a little prenatal clinic one afternoon each week. In our county we have only the poor and the middle class people. We have none of the so-called upper class and if we did they would not be having babies anyway, so they can be eliminated from our observation. The figures given are evenly distributed over the entire county. The social and economic situation is about the same for both groups considered. In other words, the women who attend this prenatal clinic are not all taken from either the lower or middle class group. We insist that the expectant mother either go to her family physician regularly or attend our prenatal clinics. A few of the physicians send all their patients to us, so that our patients are simply the average physician's practice. For the two years ending July 1, 1933, there were born in our county 352 babies. In this period, ninety-one, or one fourth of all mothers of these babies came to our own clinic regularly. This number does not include those who received prenatal care from their family physician. It embraces only those who actually came to the clinic and received complete examinations with pelvic measurements, routine wassermanns and smears. A wassermann is most important because the maternal case of syphilis may be discovered here for the first time. The patient may be put on treatment and when the baby is born it can be immediately treated with the saving of much valuable time and a more likelihood of having a healthy child. We are not interested in maternal mortality because the death certificates show no maternal deaths in either group. However, we are vitally interested in the infant mortality. Now then, 91 mothers came to the clinic; 261 did not. Up to July 1st, 1933, 87 of these 91 mothers had been delivered. These babies are now three months to twenty-four months old. The number of infants lost in this group has been 4, or an infant mortality of 45.4, and that is good. As a matter of fact, that is so good that I included in the group of 4 babies lost, one stillborn baby, otherwise the infant mortality would have been in the lower thirties. Infant mortality for the state as a whole for the last two years has been around 70. So, results are certainly shown when the rate is more than halved. On the other hand, the number of deaths occuring among the 261 babies whose mothers did not come to the clinic is 32, or an infant mortality of 122.5, and that is bad. If these factors had been constant for this group of 261, and so far as we could determine there was no difference in the social and economic status of those who came and those who did not, and if these 261 mothers had had the same care as the 91, then prenatal care in this county would have resulted in the saving of 20 babies. Let us carry the deductions a little further, suppose the population of all the counties had only been the same as this one county which is one of the smaller counties, then it would not take a mathematician to figure out that if 20 babies were saved in one county, in 120 counties there would have been saved 2,400 babies, which is a somewhat fantastic figure, but that is the way it presents itself to me. We find that there is a much larger saving of infants because the mother becomes acquainted with clinic ways and is therefore more amenable to advice in the care of the infant after she has attended these prenatal clinics.

Prenatal work is so important. It serves to uncover so many physical defects that may be remedied. It brings to light so many cases of unsuspected syphilis and in so greatly appreciated by these patients that it ought not to be longer neglected.

Prenatal work is very easy. The customs of centuries have linked the pregnant mother to the strongest emotional appeal of both the individual and the community. That old false modesty has largely disappeared. She is now ready to be told by any nurse, physician or social worker that there are certain things to be done before confinement, and it takes very little urging to make most of them seek prenatal advice when they are convinced of the importance of it. Is prenatal care worthwhile?

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**Late Roentgenism of Bones.**—In 1916, Grasmann's patient was treated with the roentgen ray for lupus of the hand. Ten years later, the skin was shrunken, dry, telangiectatic and pigmented; the muscles were weak and atrophied; the bones of the hand and forearm were smaller than normal, the cortex was thin and the marrow cavity of the radius had disappeared. Grasmann ascribes this condition to an injury of the bone cells caused by changes in the supplying blood vessels incident to the intensive roentgen irradiation given ten years ago.

# FACTORS AFFECTING THE MORTALITY IN EARLY INFANCY*

LEE PALMER, M. D.

Louisville.

The study of Infant Mortality has attracted the attention of health authorities for some time, and in the past 30 years efforts have been made in some of the larger cities and states in this country to reduce the excessively high death rate among infants. New York, the first city to begin this work, had a death rate in 1904 for infants under 1 year of 164 per 1000 living children, where as in 1913 this had been reduced to 102 per 1000 living children. In 1914 she had 94 deaths during the first year of life for each 1000 births. This was reduced to 81 in 1919 and to 50.8 in 1932. This illustrates what can be accomplished to lower the infant mortality rate when the problem is scientifically attacked.

Throughout the United States Registration Area the death rate for infants under 1 year in 1919 was 86.6 per 1000 births. In 1932 it was 57.9. In our own state, the death rate in 1911 was 88.4 and in 1919 was 80.7, in 1932 was 68.5 per 1000 births. This year our mortality rate is 10 above that of the United States. Twenty-nine of the states have lower infant mortality rate than Kentucky and 14 others have a higher rate than we do. The lowest state, Oregon, is 41.5. There are 5 states with a death rate for infants under 1 year between 41.5 and 45.8.

Though Kentucky has a rather young Vital Statistics Bureau, established in 1911, she has made good progress in reducing infant mortality, yet she is behind most of the states and behind the average for the Registration area of the United States. Therefore, it behooves us to make every effort to lower our infant death rate.

A study of some of the factors affecting the death rate in early infancy reveals some interesting facts. Though it is not in the scope of this paper to consider pre-natal and natal care of the mother, yet no paper on infant mortality is complete without a brief consideration of these two points.

About 40 per cent of the deaths during the first year of life occur in the first month. In Kentucky last year, there were 1087 deaths from premature births, 532 from congenital debility, 167 congenital malformations, 95 from birth injuries, and 16 from other diseases peculiar to infancy, making a total of 1888 or 40 per cent of the total deaths for the first year of life, and most of these occur during the first few days after birth.

It has been conservatively estimated that at least 40 per cent of this number can be prevented by careful pre-natal and natal care of the mother, together with proper care of the infant immediately after birth. The infant should have a careful physical examination watching for symptoms of prematurity, birth injury, atelectasis, congenital heart disease, hemorrhagic diathesis, congenital syphilis and evidence of sepsis. In the event any of these conditions are present, treatment if promptly instituted will considerably reduce the high mortality rate during the first few days of life.

It is at this stage in the infant life that sanitary conditions play such an important part in preventing infections and thereby cutting down on the mortality rate. A very interesting and detailed study of the infant mortality rate of Denver, Colorado, has recently been made and reported by Kalpin in the American Journal of Public Health. It was shown definitely that her high death rate was due to horrible living conditions in certain sections of the city. They found that along the banks of the Platte river, running almost through the center of the city, was the elevated railroad. All through this section were hundreds of one room shacks built prior to 1900, where Mexicans and other foreign races lived. In this district outside toilets were used and the sanitary conditions were terrible. The death rate in these sections ranged from 210-100 per 1000 births. The combined death rate of the 5 best residential districts in Denver was only 32 per 1000 births. In other districts it ranged from 50 to 75 to 100. In this same study it was found that racial factors played an important part. Likewise, family income showed a very definite effect on the infant mortality rate.

| Annual Income | Death rate per 1000 births |
|---|---|
| $250 (because of charity) | 72 per cent |
| $250-$500 | 202 per cent |
| $500-$750 | 101 per cent |
| $750-$1000 | 91 per cent |
| $1500-$2000 | 57 per cent |
| $2500-$3000 | 49 per cent |
| $3000-over | 25 per cent |

Infants tolerate extremely hot weather very poorly. Many babies die because of the effect of heat in lowering their vitality and impairing their digestion making them much more susceptible to intestinal infections. Also food very readily becomes spoiled and infected thereby producing a direct infection in the gastro-intestinal tract of the infant. In cold weather babies are very susceptible to

*Read before the Kentucky Conference of Social Workers, Berea.

acute upper respiratory infections. Both of these conditions considerably increase the mortality in infancy.

Breast milk is far superior to any other type of infant food, and if it is present in great enough quantity it is always of good quality. This is one of the most important factors especially during the summer months to keep down infections of the gastro-intestinal tract of infants. Also breast milk contains certain antibodies that are within themselves prophylactic to certain infections. In the event there is deficient quantity or absence of breast milk, then it is necessary to use artificial feeding; of these, cow's milk modifications rank first. Any of the other foods that are properly prepared and kept sterile are good. The vitamins are of great importance in preventing the avitaminosis group of diseases.

Next we shall consider the death rate resulting from diseases during the first year, and especially occurring after the first few weeks of life.

In accordance with the classification used by our Board of Vital Statistics the first to be considered are:

GROUP I. Epidemic and infectious diseases including tuberculosis.

This group of diseases accounted for 531 or 12 per cent of the total deaths under 1 year of age, in 1932. The most important of these is whooping cough, causing 165 deaths. This disease is dangerous because children have the infection for 10-14 days before a definite diagnosis is made. It is during this time that the disease is most contagious, and exposure is so apt to take place. New-born babies infected with whooping cough have a very high mortality rate because of the likelihood of developing broncho-pneumonia.

The second of importance in this group is influenza which accounted for 130 deaths in 1932. The death rate in both whooping cough and influenza can be greatly reduced by preventng new-born babies from being exposed to these infections.

While diphtheria accounts for only 56 deaths during the first year, during the second year and on up to the fifth year, the number of deaths from this is greatly increased. It is during the first year that all infants should be immunized to diphtheria by the administration of diphtheria toxin-antitoxin or toxoid. It must be remembered that all infants receiving diphtheria toxin-antitoxin or toxoid should subsequently have a Schick test to determine whether or not they are immune. Only about 70-80 per cent of these children receiving diphtheria toxin-antitoxin or toxoid are immunized. The other group are still susceptible to diphtheria and should have the diphtheria toxin-antitoxin repeated.

Dysentery is considered in this group. This caused 43 deaths last year. It can be prevented by careful sterilization of food and water. What we will have to say about diarrhea later will also apply to dysentery.

Tuberculosis accounts for 27, or less than 1 per cent of the deaths of the first year of life. While this is a very small number, yet it is during infancy and young childhood that most of our people become infected with tuberculosis. We should remember in the event a diagnosis of tuberculosis is made on a child, that it is of vital importance that the individual spreading the infection should be found and isolated.

Thirty deaths from syphilis were reported in this age group last year. This can be greatly reduced by taking a Wassermann on every pregnant woman and anti-luetic treatment instituted on the positive cases early during pregnancy. Here it is interesting to know that Dr. Davidson, Professor of Pediatrics, Duke University, states that for every one infant born with clinical symptoms of syphilis, there are five cases proven to have syphilis by a positive Wasserman test. Therefore, it is important that Wassermanns should be used more frequently in our examination of these patients, and specific treatment be employed where indicated.

GROUP II. General Diseases not included in Group I.

This group of diseases is of little importance during the first year of life, accounting for only 21 deaths, or about ½ per cent of the total. There are two conditions in this second group that we would like to mention. First, disease of the thymus gland which accounted for 5 deaths last year. Of course, there is nothing that can be done to prevent these. However, by careful examination the disease should be diagnosed early, and x-ray treatment given over the thymus. This will reduce the size of the gland, and usually produce a cure. Five deaths in group II are attributed to rickets. If the mother is properly fed and the baby given Vitamin D in the form of cod liver oil and sunshine, all of these deaths could be prevented.

GROUP III. Diseases of the Nervous system and organs of special sense.

There were 147 deaths resulting from this group of diseases. Simple meningitis accounting for 68 of these deaths. The only thing that can be done to cut down on this group, is isolation of infants from patients with acute upper respiratory infections, thus reducing infection in the nose and throat of infants, thereby decreasing the danger of meningitis as a complication. There were

55 deaths from cerebral hemorrhage. I presume that these 55 cases have not resulted from birth injuries but have occurred later during the first year. To reduce this number, early diagnosis and proper treatment must be instituted.

Group IV. Diseases of the Circulatory system.

These diseases account for 70 deaths. Little can be done from a public health standpoint to reduce this number.

Group V. Diseases of the Respiratory Tract.

About 14 per cent of the deaths of infants are caused by this group of diseases. By far the most common of this group is broncho-pneumonia. This is a secondary disease, that is, it follows some other infection of the upper respiratory system. As stated above, it is a very important complication in whooping cough and in measles, also acute upper respiratory infections such as cold, tonsillitis, bronchitis. Lobar pneumonia which is a primary infection accounts for 175 deaths. This disease is more prevalent in children over 2 years old. Best results in preventing broncho-pneumonia are to avoid exposure to measles, whooping cough, also try to prevent acute upper respiratory infections. However, if these develop treat the condition immediately rather than waiting until extension has resulted in pneumonia.

Group VI. Diseases of the Digestive System.

The greatest cause of death during the first year of life, are diseases of the digestive system, accounting for 640 deaths in 1932. Its frequency can be greatly diminished by correct feeding and hygienic surroundings. Here again, we would like to call attention to the fact that breast fed infants are not so likely to develop this condition. If it is necessary to give artificial feedings, these should be carefully prepared, sterilized and kept properly refrigerated. While the above is true, yet there are a lot of cases resulting from parenteral infection, these should be carefully looked for and properly treated. In this condition and in so many others, if in spite of the preventive measures diarrhea develops, it should be treated early and not allowed to continue until it has become severe, as it is the neglected cases that so frequently result in death.

Group VIII. Non-venereal Diseases of the Genito Urinary System.

This group of diseases accounted for 12 deaths, 11 of which were attributed to acute nephritis. Acute nephritis in childhood is always secondary to some other infection, especially those of the upper respiratory tract or to the epidemic diseases as scarlet fever. By preventing these, or properly treating them, we will be able to reduce the number of deaths from acute nephritis.

Summary

Our efforts to reduce the infant mortality rate should be directed along the following lines:

1. Proper pre-natal and natal care of the mother.
2. Proper care of the baby immediately after birth.
3. Regulation of diet.
4. Sanitary surroundings.
5. High economic status of our people.
6. Prevention of all diseases possible by public health measures.
7. Early recognition and treatment of diseases that are not preventable.

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## LYMHPOPATHIA VENEREA IN KENTUCKY; PRELIMINARY REPORT

Rufus C. Alley, M. D.

Lexington.

During the past few years many scattered articles have appeared in the literature concerning the relatively new and supposedly rare disease lymphopathia venerea. It is also known by other designations, such as lymphogranuloma inguinale, lymphogranulomatosis, the fourth venereal disease, the sixth venereal disease, climatic bubo, and other confusing names. Most of the American literature has come from venereal and urologic clinics in the larger centers of population and gives one the impression that it is a rare condition found only by careful search through large volumes of clinical material.

Briefly, the outstanding features are as follows: It is a disease of both sexes and is transmitted by sexual contact. The primary lesion is an evanescent small abrasion or vesicle that is rarely seen or recognized clinically. This lesion occurs on the penis of the male and about the vulva, vagina or cervix in the female.

The infectious agent is thought to be a filterable virus which has a predilection for lymphatic tissues. In the male it may follow the regional lymphatics and produce suppurating inguinal lymphadenitis. In the female the rectovaginal or rectovulval lymphatics may be involved and more or less typical genito-anorectal lesions produced. Negroes are affected more frequently than whites.

Convincing evidence has been produced to indicate that inflammatory stricture of the rectum is the result of invasion of the rectal lymphatics by this unknown contagion.

My interest in this disease was aroused because of its anorectal manifestations. In

the proctology clinic at the Lexington Public Health Center, I have made positive diagnoses of this disease in 22 patients, 17 of whom have ano-rectal involvement These cases have been picked up in less than a year from a volume of clinical material represented by approximately 10,000 patients who visited the Lexington Public Health Center during 1933.

The diagnosis is suspected by observation of the clinical features and is confirmed or refused by the specific intracutaneous test of Frei. The Frei antigen used for this test consists essentially of a saline suspension of pus aspirated from a known case and inactivated at 60 degrees C.

A detailed report of the investigation of this disease in Lexington will be made in the near future. In the meantime it is hoped that this preliminary report will stimulate the interest of others in a disease that is by no means rare.

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## JAMES FRANKLIN PEYTON, M. D.
### A BIOGRAPHY

J. G. Carpenter, M. D.
Stanford.



James Franklin Peyton, M. D.
August 1, 1839-August 1, 1932
Stanford, Ky.

Dr. James Franklin Peyton, son of Simon Valentine Peyton and Ann McKinney Peyton, was born on the Peyton's Well Farm, Hanging Fork River, Lincoln County, Kentucky, August 1, 1839. His grandparents were Valentine Peyton, of England. and Betsy Edwards, of Wales. Emigrating to America, they located in Virginia for a while and then removed to Lincoln County, Kentucky, purchasing the Peyton's Well Farm, situated midway between Logan's Fort, or St. Asaph's Fort, the site of the present town of Stanford, and Carpenter's Fort, west of Hustonville and three miles from McCormack's Fort,

Dr. Peyton received his literary education in the county schools and under the special tutorship of the "Rev." John A. Boyle of Hustonville. He began the study of medicine at the age of seventeen years, in 1856, under his relative and neighbor, Dr. Daniel Johnson Alcorn. In 1858, he matriculated in the Medical Department of the University of Louisville. While there two of his professors were the famous surgeon and teacher, Dr. Samuel D. Gross Sr., and Dr. Henry C. Miller, author, teacher, and, at that time, America's foremost obstetrician. Upon graduation, Dr. Peyton returned to his home in Lincoln County and became associated in the practice of his profession with his former preceptor, Dr. Daniel Johnson Alcorn.

In October, 1861, Dr. Peyton enlisted in the United States Army and was commissioned a Second Lieutenant in Company K, 19th Kentucky Volunteers, Infantry. The captain of this company was William Fortunatus McKinney; the regiment was commanded by Col. Landrum of Lancaster, Kentucky. Later, he was made a First Lieutenant and participated in the Battle of Mill Springs (1862), Wayne County, where General Zollikoffer was killed. He was located at the Somerset (Ky.) Hospital for a while, and in April, 1863, was made Assistant Regimental Surgeon. Later, he was commissioned a Major and transferred from the 19th Kentucky Regiment to the 11th Kentucky Regiment. He was with General Sherman in his "March to the Sea" and participated in "Stoner's Raid through Georgia." During this raid he rode a white pacing mule about fifteen hands high.

In May, 1896, Drs. Peyton, George Perkins Redish, Letcher, James Kinnaird and the writer were delegates to the American Medical Association at its annual meeting in Atlanta, Georgia. Incidentally, it may be noted that Dr. Hawkins Brown of Hustonville, Kentucky, was the first Vice President of the A. M. A. A feature of the Atlanta meeting was a great barbecue given to members of the Association. Not far from the table at which Dr. Peyton and I were seated were two mules—a white one and a brown one—hitched to a wagon. They looked old, care worn and gentle and had "U. S." branded on their left shoulders. Noticing these mules, Dr.

Peyton remarked, "There is the white mule, 'Jack', I rode on 'Stoner's Raid through Georgia' in 1864." He went to the mule, called it, "Jack" and patted it on the head. The mule brayed in gentle tones, rubbed his head against Dr. Peyton's arm, showed genuine recognition and affection, and seemed to say, "Glad to see you, thank you—thank you!" The owner of the mule said he had bought the pair at an U. S. Army sale after the War—in 1865.

Dr. Peyton was discharged from the Army at Louisville in 1865 and resumed the practice of medicine, surgery and obstetrics in Stanford, Kentucky. In 1868, he took a special course in medicine and surgery at Columbia University, New York City, receiving his adenundum degree of M. D. from that institution. While there he received special instruction in gynecology from the noted teacher and author, Prof. T. Gallaird Thomas. In 1867, he was appointed surgeon of the Louisville and Nashville Railroad Company.

For thirty years Dr. Peyton served as a member of the local U. S. Pension Board of Examiners at Stanford. He was a member of the Lincolon Count Medical Society, the Central Kentucky Medical Society, the Kentucky State Medical Association and the American Medical Association, a Master Mason and a Knight Templar. He served for several terms as a member of the Stanford City Council and was one of the promoters (1889-90) of the Stanford Water Works and Electric Light and Ice Plant, of which he was at different times Vice President and President.

In 1895, Dr. Peyton and the writer joined in organizing the Joseph Price Hospital in Stanford. This hospital had a capacity of sixteen beds, and so successful was it from its establishment that it was unable to meet the demands upon it. The laity and physicians of Lincoln and adjoining counties were so generous in their support that there was a constant waiting list of patients seeking admission. Nor was its clientele limited to the immediate and surrounding country. Patients came from Louisville and Lexington; from St. Louis and Kansas City, Missouri; from Pittsburgh and New Orleans; from Alabama, Tennessee, Indiana, Iowa, Texas and even far away California for special treatment and surgery. After ten years or more of successful operation this hospital was closed, August, 1906, solely because of the impaired health of the originators, both Dr. Peyton and myself believing, at the time, that neither of us had long to live. Dr. Peyton at that date, sixty-seven years of age.

In early manhood Dr. Peyton joined the McCormack Christian Church on Hanging Fork.

Dr. Joseph Price of Philadelphia, the highly successful and famous surgeon, was a great personal friend of both Dr. Peyton and the writer. He made several visits to Stanford, Kentucky, and, while there, performed many skillful operations which resulted in the saving of not a few lives. When informed that a hospital had been established in Stanford and named for him, Dr. Price donated six beds to the institution. Dr. Peyton frequently remarked that a great deal of his skill in surgery was due to association with Dr. Price. The names of both are revered in many homes, not only in Lincoln County, but in all the surrounding territory.

Dr. Peyton died on August 1, 1932, the ninety-third anniversary of his birth.

## BOOK REVIEW

MYSTERY, MAGIC AND MEDICINE—By Howard W. Haggard, M. D., Associate Professor of Applied Physiology, Yale University. Doubleday, Doran, and Company, Inc., Garden City, N. Y., 1933. Price $1.00.

Dr. Haggard, author of such popular books as "Devils, Drugs and Doctors," and "The Science of Health and Disease," has added another to their number.

In this volume he has described the rise of medicine from superstition to science, the history of a long and difficult struggle with the mysteries of life.

Beginning with one of the most ancient people who we know to have practiced medicine, the Egyptians, he tells in a most fascinating manner the progress of medicine to its present position, besides science and industry, "on the prow of the ship of civilization."

The clean and vivid paragraphs of the author's text are further illuminated by an unusually large number of illustrations. Not the least interesting part of the book is the fifty pages of short biographies of the men who are only mentioned in the text, which completes the work. It is recommended to physicians who are interested in the history of medicine or who have occasion to speak to non-professional audiences.

THE SURGICAL CLINICS OF NORTH AMERICA: Issued serially one number every other month. Volume 13, No. 6. Index Number. (Pacific Coast Surgical Association Number—December 1933) 284 pages with 97 illustrations. Per clinic year (February 1933 to December 1933) Paper, $12.00; Cloth, $18.00 net. Philadelphia and London: W. B. Saunders Company, 1933.

The clinic report of Dr. A. J. Scholl is particularly interesting and his monograph on permephritic abscess is well written and illustrated. Over 43 subjects are discussed all interesting and timely.

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NEXT MEETING HARLAN, OCTOBER 1-4, 1934


## COUNTY SOCIETY REPORTS

**Third District:** The Third District Medical Society met at the Helm Hotel, Bowling Green, Ky., at 11 A. M. on Wednesday, October 25th.

Dr. J. M. Adair reported a case of Stokes-Adams disease or heart block.

Dr. S. S. McReynolds reported a case of a dope fiend, who resorted to an assumed injury while traveling on Highway as a means of securing hypodermics.

Dr. F. D. Reardon reported a case of anaphylaxis in a dope fiend or susceptibility.

Dr. Herman Spitz, Nashville, read a paper on "Bronchial Asthma." This was discussed by Drs. B. S. Rutherford and F. D. Reardon.

Luncheon was served at the noon hour, there being about thirty doctors present.

After lunch Dr. O. N. Bryan, Nashville, read a paper on "Myxedema." This was discussed by Drs. Rutherford, Reardon, Blackburn and Bryan.

Dr. C. C. Howard, Glasgow, read a paper on "Infections of the Genito-Urinary Tract." This was discussed by Drs. Bell, Blackburn, McReynolds, Gary, Vickers and Howard.

The meeting adjourned to meet in Bowling Green in January.

JNO. H. BLACKBURN, Secretary.

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**Adair:** The Adair County Medical Society was host to the extension course conducted under the Kentucky Medical Association, held in Columbia, October 26th.

Dr. J. B. Lukins, Dr. E. R. Gernert and Dr. J. H. Pritchett were the guest speakers. Each paper was discussed and the visiting doctors all took part in the quiz that was conducted.

The following doctors were present: Drs. Graham, Simpson, Simmons and Rowntree from Green county. Drs. Parrigan, Roberts and Rankin from Wayne county. Dr. F. Owsley from Cumberland county. Drs. Lawrence and Tarter from Russell county. Drs. Atkinson and Elrod from Taylor county. Drs. Moore, Richards and Fallis from Barren county. Dr. J. W. Scudder from Casey county. Dr. P. W. Bushong from Metcalfe county. Drs. Russell, Flowers, Bolin, Gose, and Mercer from Adair county. Dr. C. M. Russell from Columbia presided.

WOODRUFF J. FLOWERS, Secretary.

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**Franklin:** The Franklin County Medical Society was host for an extension course, conducted under the auspices of the Kentucky State Medical Association, which was held in the Rotary Room of the Capital Hotel, Thursday, November 23rd.

The program was conducted by Dr. Emmet F. Horine and Dr. Owsley Grant of Louisville,

who alternated as lecturers for twenty minute periods.

Dr. Horine was first on the program.

Subject, Etiologic Diagnosis of Heart Diseases.

Second Period, Diagnostic Criteria of Heart Diseases.

Third Period, Types of Heart Failure and Management.

Fourth Period, Graphic Presentation of Cardiac Arrhythmia.

Dr. Grant:

Subject, Diagnosis of Prostatic Diseases.

Second Period, Treatment of Prostatic Disease.

Third Period, Diagnosis and Treatment of Inflammation of the Urinary Tract.

Fourth Period, Differention between Medical and Surgical Diseases of the Kidney.

Both of these lectures were illustrated with moving pictures and stereoptical slides. The program began promptly at ten-thirty running until one o'clock when it adjourned for a delicious luncheon served by the Hotel. At two-thirty the program was resumed. Some thirty-five physicians from Anderson, Woodford, Fayette, Scott, Henry, Shelby and Franklin Counties attended the meeting and seemed to enjoy each subject thoroughly.

The next regular monthly meeting will be held Thursday, December 14th.

C. E. YOUMANS, Secretary.

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**Grant:** The usual meeting of the Grant County Medical Society met at the office of the Health Department in Williamstown, Ky., with the following members present: Drs. N. H. Ellis, A. D. Blaine. C. D. O'Hara, C. A. Eckler and President J. W. Abernathy in the chair. The minutes of the last two meetings were read and approved as we had an open session our last meeting in an all-day lecture course.

The committee on resolutions of respect to Dr. W. J. Zinn deceased, asked further time and was referred to December meeting. Mr. O. P. Ellison presented the bill for five dollars for W. J. Zinn for flowers. Motion made and carried that it be paid. Those members present contributing one dollar each were Drs. Ellis, Abernathy, O'Hara, and C. A. Eckler.

We were lucky to have with us at this meeting Dr. Jones, the state epidemologist, who had been here at Morgan, on account of Diphtheria there. He states that he finds quite a few cases there of Vincent's Angina as well as Diphtheria. He made an excellent discussion on Vincent's Angina, going into detail on diagnostic points and made it very interesting to the members present.

There were quite a few case reports of interesting diseases, reported by the members present, and we feel quite sure the absent ones were the losers.

At our next meeting in December we expect all members to be present as that will be election of officers for a new year.

We adjourned at this hour feeling all had been benefitted by coming and resolved to meet again at our regular meeting, December 20.

C. A. Eckler, Secretary.

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**Letcher:** The Letcher County Medical Society held its October meeting at Jenkins (this county), Tuesday night, October 31st. The members of the society were guests of the Staff of the Consolidated Coal Company. The following physicians and visitors were present: Drs. Thomas Jennings, W. H. Lawson, G. D. Ison, (President), T. M. Perry, B. C. Bach, Weaverling, J. E. Stanfill, R. Dow Collins, E. F. Sheppard, T. M. Radcliffe, B. F. Wright, D. V. Bentley, J. E. Crawford, J. Y. Harper, Robert McReynolds, and Judge Abbott.

The Jenkins Staff gave us a sumptuous repast which every one enjoyed to the fullest. Dr. Ison, presiding, called the meeting to order for the program of the evening,—the first speaker being Dr. B. F. Wright (our Representative of the 97th Legislative District comprising the counties of Letcher and Perry), who made a most instructive and timely talk on "Estimation of Disability in Industrial Accidents." The discussions were lead off by Dr. Sheppard, then practically every person present had something to say on this timely topic; by the time all had spoken their views it was 11 P. M.—too late for the other paper. Every physician said this was one of the most enjoyable, as well the most educational meeting in many months.

The next meeting will be held here in Whitesburg, November 28th.

P. S. As this was Halloween night we all had a difficult time getting home due to logs, fence rails, cross ties, etc. being in the highway at every little distance.

R. D. COLLINS, Secretary.

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**Grant:** The Grant County Medical Society met at the office of the Health Department in Williamstown, with the following members present, N. H. Ellis, A. D. Blaine, C. M. Eckler, C. D. O'Hara, and J. W. Abernathy, president of the chair and C. A. Eckler, secretary.

The minutes of the last meeting were read and approved and as this was the last meeting of the old year, we entered at once on the business of the evening and proceeded to the election of officers for 1934. Nomination for president was then declared in order and Harry F. Mann of Crittenden, was nominated and unanimously elected as president of our society for the ensuing year. Nominations were then opened for vice-president, and J. D. George, of Corinth, was nominated and unanimously elected as vice president for the ensuing year. Dr. C. A. Eckler

was nominated and unanimously re-elected as secretary and treasurer. C. D. O'Hara of Williamstown, was elected delegate to the State Meeting and Dr. C. M. Eckler of Williamstown, was elected alternate. Report of committees was called for and C. M. Eckler and Dr. C. D. O'Hara, committee to draft resolutions of Respect to W. J. Zinn, deceased, read the following resolutions.

**Resolutions of Respect.**

"Dr. William J. Zinn, an honored member of this society died Oct. 12, 1933 at Christ Hospital, Cincinnati, Ohio.

Dr. Zinn, though he was perhaps best known and more widely appreciated as a Doctor in Dental Surgery, having practiced successfully this branch of his art in Williamstown, Ky. and Cincinnati, Ohio, for forty years or more. He had also attained and had conferred upon him the Cincinnati School of Medicine and Surgery, now the Medical Department of the University of Cincinnati, the degree of Doctor of Medicine.

While he sought this scholarship as a means to increase his efficiency as a Doctor in Dentistry and never attempted to practice art of medicine and surgery, he had always a lively interest in the achievements of our profession and was constantly a member in good standing of our County and State Societies as he was a member of his own State Dental Association.

We knew him as a most ethical gentleman, skillful in his art, ever alert, for these details that promised improvement in his profession; promised, too, a higher type, a more scientific service to be rendered by his co-workers and himself, in the subjugation of diseased conditions by the use of preventative measures. He was a keen student, therefore a wise and capable observer of the relation existing between general disease and health conditions. as he was a tireless, protagionist, of oral hygiene, termed examinations and early repair as opposed to a careless indifference with its attending, useless, and wholesome destruction.

As a consultant, he was tireless, careful, dependable, rigidly consciencious and honest.

He was an ornament to the art he practiced and a craftsman of merit and skill.

This society deplores the passing of so worthy and so useful a member as was Dr. Zinn; our profession so staunch a supporter, so helpful an ally; his own profession and his patrons, so able an exponent, so true a friend, so excellent and efficient a servant. Indeed, all could ill have spared a better man."

We now took up the subject for the evening, "Gall-Bladder Pathology." C. M. Eckler opened the discussion, in a clear concise manner, relating the many conditions that enter into Gall Bladder Pathology. He went into it in detail, from history and recent literature on the subject and from his own practical experiences. His talk was very instructive and up to date with present day teaching. It was very much enjoyed and discussed by all present.

We all enjoyed this meeting hugely and adjourned to meet the regular time in Jan. 1934.

C. A. ECKLER, Secretary.

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**Franklin:** The regular monthly meeting of the Franklin County Medical Society met in the Capital Hotel Thursday, Dec. 14th, 1933, with the following members present: Drs. Travis, Martin, Adams, Patterson, Baughman, Snyder, Snyder, Coblin, Minish, Frymire, Coleman, Jackson and Youmans.

Minutes of the last meeting were read also the report of the Treasurer. Both were adopted. It was moved and seconded that the Secretary be made publicity agent for the society. Next line of business was the election of officers for the Society for the year 1934 which are as follows:

President, R. M. Coblin, Vice President, A. M. Lyon, Secretary-Treasurer, Wm. S. Snyder, Jr., Delegate, L. T. Minish, Alternate-Delegate, C. T. Coleman. Censors: L. T. Minish 1 yr., C. T. Coleman 2 yrs., F. M. Travis 3 yrs.

The programme for the meeting was furnished by Dr. John Scott of Lexington, who gave a most interesting talk on "Some Objective Treatment of Heart Diseases" which was enjoyed by all present.

Following this lecture, the Society adjourned to the Hotel Dining Room for lunch.

C. E. YOUMANS M. D., Secretary.

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**Greenup:** The Greenup County Medical Society, at its regular meeting in December, elected the following officers for the year 1934:

President: M. W. Meadows, Fullerton.

Vice-President: J. A. Franz, Russell.

Secretary-Treasurer: Dr. Carl M. Gambill, Greenup.

Delegate: H. T. Morris, Greenup.

Alternate: J. A. Franz.

Board of Censors: Dr. H. T. Morris (one year); J. A. Franz (two years); and Dr. W. S. Morris, Fullerton (three years).

Program Committee: Drs. H. T. Morris and Carl M. Gambill.

During the coming year the programs will consist chiefly of papers read by members of the society.

Meetings are held regularly on the second Friday evening of each month.

CARL M. GAMBILL, Secretary.

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**Harlan:** The Harlan County Medical Society met in business session December 6th and elected the following officers for 1934: President,

M. L. Gunn, Harlan, Vice-President, P. W. Adkins, Insull, Secretary-Treasurer, Clark Bailey, Harlan. Delegates and Alternate-Delegates to the State Medical Convention elected are as follows: J. C. Nash, Coxton, D. M. Fields, Cumberland, Delegates, W. R. Parks, Harlan, J. W. Nolan, Harlan, Alternate-Delegates.

We are forming our committees in preparation for the State Meeting and hope to do things as they should be done.

CLARK BAILEY, Secretary.

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**Harrison:** The Harrison County Medical Society held its annual meeting and dinner at the Hotel Harrison Monday, December 4, 1933.

Visitors and members present:

Drs. Caldwell, Shaw, Brown, Campbell County; Shinkle, Cincinnati; John W. Scott, Scott Breckenridge, Sterne and Vance, Lexington; McMurtry and McKinney, Falmouth; Orr, Daugherty, Blemke, Boxley and Dailey, Bourbon County.

Drs. Wells, Smiser, Rees, N. W. Moore, Martin, Wyles, Moody, W. B. Moore, McDowell, Swinford, Carr, Ross, Todd, Chamerlin, Midden, Blount, McIlvain, Brumback and Hedges.

The meeting was called to order by the President, Dr. J. M. Rees, for the purpose of electing officers for the coming year, which resulted as follows:

President, M. McDowell; Vice-President, H. Todd Smiser; Secretary-Treasurer, W. B. Moore.

Member of the Board of Censors: H. C. Blount. Delegate, W. B. Moore. Alternate, J. P. Wyles.

During the dinner hour extemperaneous talks were made by Drs. Shinkle, Orr, Daugherty, Blemke, Boxley, Dailey, John W. Scott, Breckenridge, Shaw, and others.

The meeting was a very enjoyable one.

W. B. MOORE, Secretary.

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**Henderson:** On the evening of December 18th the Annual Banquet and election of officers for the ensuing year was held at the Hotel Soaper.

The following Doctors to serve next year:

President, W. V. Neel; Vice-President, E. K. Galloway; Secretary-Treasurer, W. L. O'Nan; Delegate, John Rogers; Alternate, E. N. Powell; Censors, G. W. White, J. O. Strother, Silas Griffin.

W. L. O'NAN, Secretary.

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**Jefferson:** The following is the February program of the Jefferson County Medical Society:

**February 5th**

Plans and Policies of Public Health

State. Arthur T. McCormack, M. D.

City. Hugh R. Leavell, M. D.

Jefferson County. John D. Trawick, M. D.

Discussion to be opened by John Boggess, M. D., Medical Director of U. S. Public Health Service Marine Hospital, Louisville, Kentucky.

**Symposium on Amebiasis**

From Medical Standpoint, Morris Flexner, M. D.

Case Report, Harry S. Frazier, M. D.

Surgical Aspects, H. H. Hagan, M. D.

Discussion to be opened by H. V. Noland, M. D. and C. W. Dowden, M. D.

CHARLES M. EDELEN, Secretary,
WALTER HUME, President.

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**Letcher:** The Letcher County Medical Society held its Annual meeting in the Dining Room of the Daniel Boone Hotel on Friday night, December 29th, 1933 from 8:00 P. M. to 11:00 P. M. (the date from the regular meeting time of December 26th, was changed due to its closeness to Christmas Day).

The following physicians and dentists were present: G. D. Ison, President and his son, Bernard, a Junior Medical student, Blackey; B. C. Bach, T. R. Collier, J. E. Crawford, R. Dow Collins, P .E. Stone, Boaz, Adkins, Whitesburg; Owen Pigman, Farraday; T. M. Radcliffe, Kona; John W. Moss, Seco; C. M. Bentley, J. E. Skaggs, Neon; Virgil Skaggs, John M. Bentley, Fleming; Edwin F. Sheppard, T. D. Vaughan. Jenkins; and Noah H. Short and Rev. McElroy, of Norton, Virginia.

After a very appetizing repast of chicken and all good things that go with it, Dr. Ison called the meeting to order. This meeting was in honor of the late Dr. John Collins, the first graduate in Medicine in Letcher County. His widow, Mrs. Polly Collins, was to have been our guest of honor, but illness prevented her being present, a regret keenly felt by all.

The President, Dr. Ison, read a very inspiring paper entitled, "Pioneer Medicine in Letcher County and Eastern Kentucky, or the Life's Work of the late Dr. John Collins." A number of the Doctors present had personally known and practiced with Dr. Collins; all paid him the highest tribute for his ingenious mind, his great sympathetic heart to the distressed and sick, and his love and cooperation for his fellow-physicians. As a Doctor, all agreed, he had no peer.

After these discussions the society busied itself about the election of officers for the year 1934. The following were elected by acclamation:

President, T. M. Radcliffe, Kona; Vice-President, J. E. Crawford, Whitesburg; Secretary-Treasurer, R. Dow Collins, Whitesburg; Delegate to State Society, G. D. Ison, Blackey; Alternate to State Society, E. F. Sheppard, Jenkins.

Board of Censors: B. F. Wright, Chairman, Dr. B. C. Bach, and Dr. G. D. Ison.

The society adjourned till regular January meeting (last Tuesday night in each month).

R. DOW COLLINS, M. D. Secretary.

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In discussing the treatment of decomposition, Feer says: "The period of repair may be shortened by giving suitable additional food; the best, probably, being buttermilk to which carefully regulated proportions of dextrin and maltose preparations or malt soup are added."—*E. Feer: Text-Book of Pediatrics, J. B. Lippincott Co., Phila., 1922, p. 284.*

In the treatment of infantile atrophy, Fischer recommends the following: "The carbohydrate should be increased by gradual addition of dextri-maltose.

"Malt soup or dextrimaltose (Mead's) should be added in teaspoonful or more doses to each feeding until the point of carbohydrate tolerance is reached."—*L. Fischer: Diseases of Infancy and Childhood, F. A. Davis Co., Phila., 1925, V. 1, p. 285.*

Concerning the treatment in the case of a premature infant, Fischer states: "Dried milk with water was given, which later was changed to whole milk, 14 ounces; water, seven ounces, and dextrimaltose No. 1, one and one-half ounces. Seven feedings of three ounces each every three hours was given. The above feeding was retained. The infant gained eight ounces at the end of the first week."—*L. Fischer: Clinical notes in a series of premature infants, Arch. Pediat. 44:227-231, April, 1927.*

Grulee, in discussing the treatment of decomposition, says: "As a rule it is best to start with 2 to 2½ or 3 ounces of albumin milk to the pound weight in 24 hours; the sugar to be added is in the form of a maltose-dextrin mixture. One should never delay too long in adding this."—*C. G. Grulee: Infant Feeding, W. B. Saunders Co., Phila., 1922, p. 265.*

Referring to the hypotrophic infant, Herrman writes: "In mild cases, the addition of dextrimaltose instead of cane or milk sugar may be sufficient to obtain a gain in weight."—*C. Herrman: The treatment of nutritional disorders in artificially-fed infants, New York M. J. 114:158-160, August, 1921.*

In discussing artificial feeding in athrepsia, Hess states: "The carbohydrates are usually added in a slowly fermentable form, such as the maltose and dextrin compounds, which are usually started by the addition of four grams per kilogram (1/15 ounce per pound) and increased until eight grams or more per kilogram (¼ ounce per pound) of body weight are added."—*J. H. Hess: Feeding and the Nutritional Disorders in Infancy and Childhood, F. A. Davis Co., Phila., 1928, p. 278.*

Concerning the treatment of marasmus, Hill says: "When the stools have become smooth and salve-like, carbohydrate, in the form of dextrimaltose, may be gradually added up to the limit of tolerance."—*L. W. Hill: Practical Infant Feeding, W. B. Saunders Co., Phila., 1922, p. 281.*

"A spasmophilic baby on bottle feeding should receive a limited amount of milk—a pint, or at the most 24 ounces in the 24 hours—to which cereal gruel and some form of sugar is added, preferably one of the malt dextrin preparations; also the early addition of other foods than milk to the baby's diet."—*M. Jampolis: Infantile spasmophilia, Interstate M. J. 25:652, Sept., 1918; abst. Arch. Pediat. 35:691, Nov. 1918.*

With reference to the treatment of diarrhea, Lust writes: "After several days, 2% to 3% of a maltose-dextrin preparation may be added (Dextri-Maltose). This is preferable to the easily fermentable lactose or cane sugar."—*F. Lust: The Treatment of Children's Diseases, J. P. Lippincott Co., Phila., 1930, p. 145.*

"The treatment of artificially fed children in the first of these groups consists in putting them on a low fat dietary, and giving them carbohydrate in the form of one of the less fermentable sugars—e.g., dextrimaltose."—*L. G. Parsons: Wasting disorders of early infancy, Lancet, 1:687-694, April 5, 1924.*

Pearson and Wyllie in discussing the treatment of milder cases of inanition say: "Regulation of this disturbed organismal balance is obtained by the addition of carbohydrates, while fat and casein are reduced. For this purpose dextrimaltose and flour are better than the ordinary sugars, since they are more slowly absorbed and have greater efficacy in their powers of controlling the flora in the large intestine."—*W. J. Pearson, and W. G. Wyllie: Recent Advances in Diseases of Children, P. Blakiston's Son & Co., Phila., 1930, p. 116.*

Regarding the treatment of the marantic infant, Raue states: "After the intolerance to sugar has been overcome a carbohydrate, preferably Dextri-maltose, may be added."—*C. S. Raue: Diseases of Children, Boericke & Tafel, Phila., 1922, p. 427.*

In discussing the treatment of atrophy, Thursfield and Paterson, state: "If the baby continues to improve, the next step in the treatment is to add to the milk one of the less fermentable carbohydrates, such as dextrimaltose . . . —*H. Thursfield and D. Paterson: Diseases of Children, William Wood & Co., 1929, p. 105.*

"I also find dextrin-maltose an excellent addition to albumin-milk when the first object of that food has been achieved and a gain in weight is desired in this way I have succeeded in feeding albumin-milk far beyond the period usually advised, with highly gratifying results."—*F. L. Wachenheim: Infant-Feeding; Its Principles and Practice, Lea & Febiger, Phila., 1915, p. 158.*

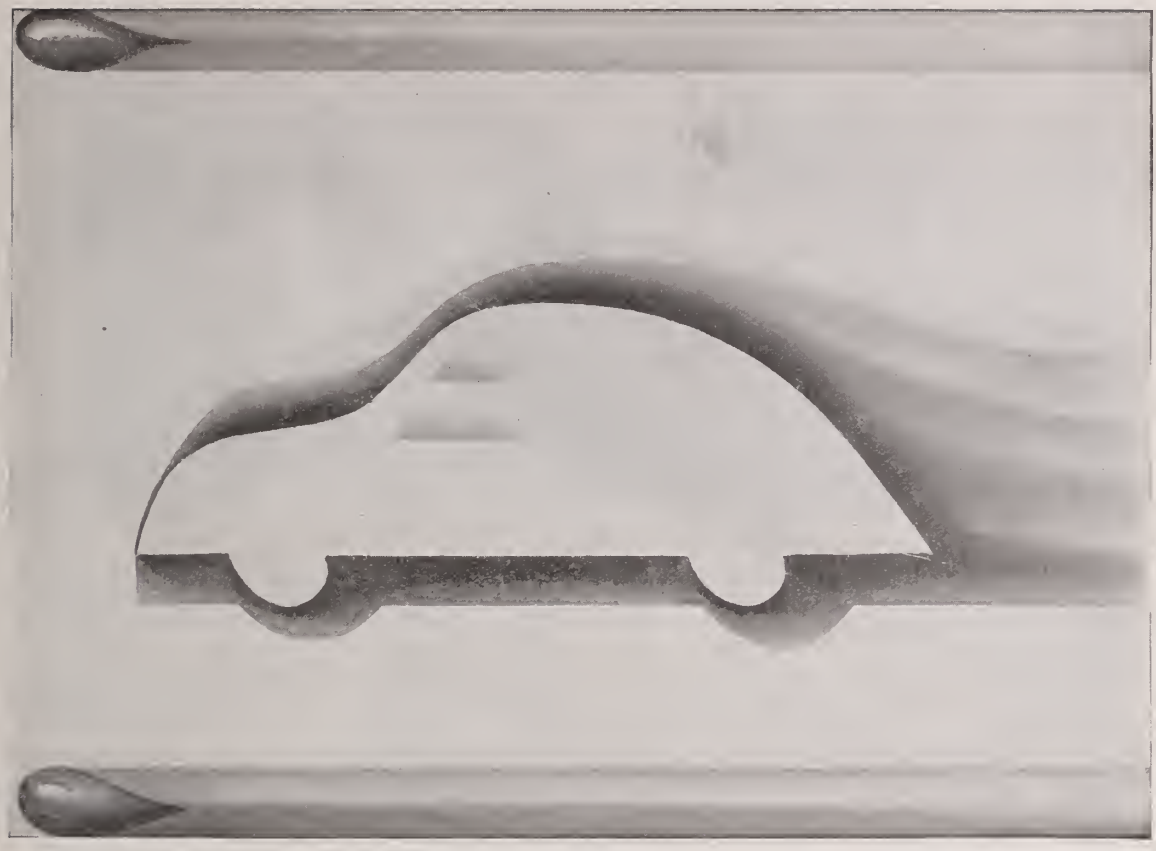
"Dextri-maltose has been substituted for lactose not infrequently, when the tolerance for the latter continues low."—*J. H. West: Low fat, high starch evaporated milk feeding for the marasmic baby, Arch. Pediat. 48:189-193, March, 1931.*

"Malt sugar is indicated when others fail to produce a sufficient gain, or when malassimilation of fat is evident."—*O. H. Wilson: The role of carbohydrates in infant feeding, Southern M. J. 11:177, March, 1918; abst. Arch. Pediat. 35:447, July, 1918.*

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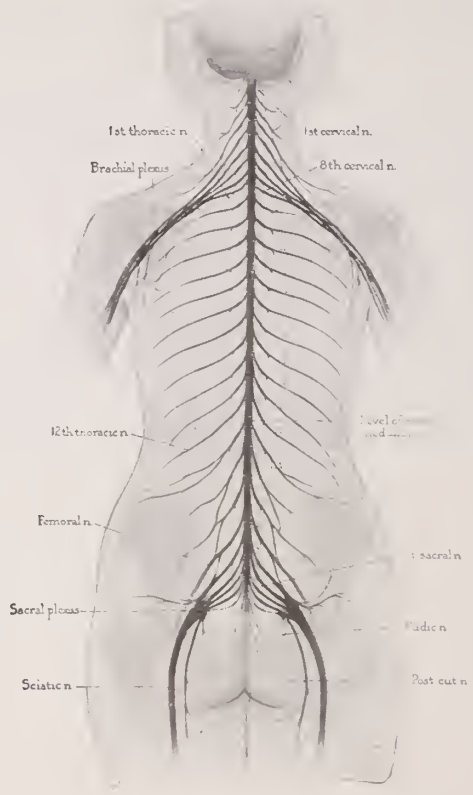
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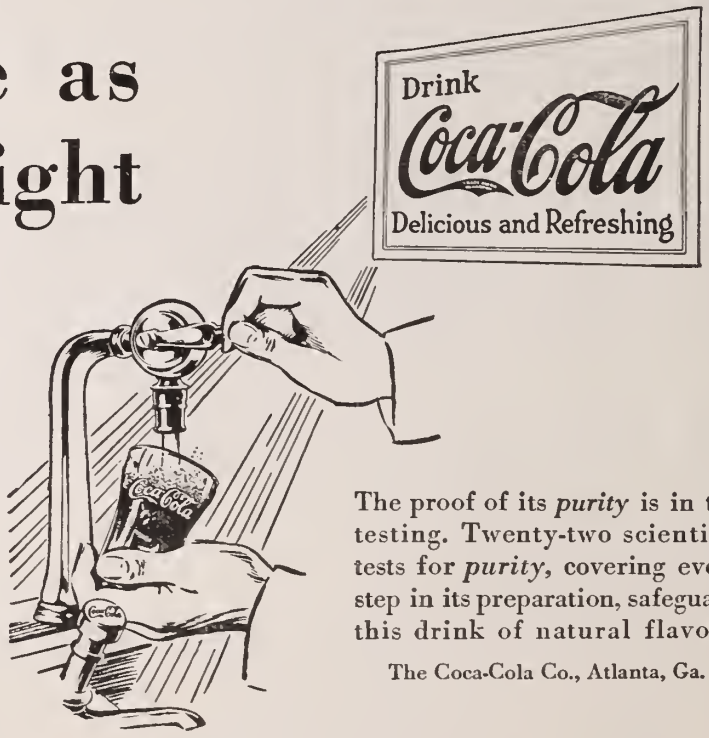
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## CALENDAR OF COUNTY SOCIETY MEETINGS

| COUNTY | SECRETARY | RESIDENCE | DATE 1934 |
|---|---|---|---|
| Adair | W. J. Flowers | Columbia | March 7 |
| Allen | A. O. Miller | Petroleum | March 24 |
| Anderson | J. B. Lyen | Lawrenceburg | March 5 |
| Ballard | F. H. Russell | Wickliffe | March 13 |
| Barren | Paul S. York | Glasgow | March 21 |
| Bath | H. S. Gilmore | Owingsville | March 12 |
| Bell | O. P. Nuckols | Pineville | March 9 |
| Boone | R. E. Ryle | Walton | March 21 |
| Bourbon | W. B. Hopkins | Paris | March 15 |
| Boyd | R. G. Culley | Ashland | March 6 |
| Boyle | P. C. Sanders | Danville | March 13 |
| Bracken | J. M. Stevenson | Brooksville | March 5 |
| Breathitt | O. M. Goodloe | Jackson | March 20 |
| Breckinridge | J. E. Kincheloe | Hardinsburg | March 8 |
| Bullitt | S. H. Ridgeway | Shepherdsville | March — |
| Butler | G. E. Embry | Morgantown | March 7 |
| Caldwell | W. L. Cash | Princeton | March 6 |
| Calloway | W. H. Graves | Murray | March 14 |
| Campbell-Kenton | Luther Bach | Bellevue | March 1-15 |
| Carlisle | G. W. Payne | Bardwell | March 6 |
| Carroll | J. M. Ryan | Carrollton | March — |
| Carter | R. G. Townsend | Grayson | March 13 |
| Casey | Wm. J. Sweeney | Liberty | March 22 |
| Christian | M. A. Gilmore | Hopkinsville | March 20 |
| Clark | R. H. Scobee | Winchester | March 16 |
| Clay | J. L. Anderson | Manchester | March — |
| Clinton | S. F. Stephenson | Albany | March 17 |
| Crittendon | C. G. Moreland | Marion | March 12 |
| Cumberland | W. F. Owsley | Burkesville | March 7 |
| Daviess | J. A. Thorpe | Owensboro | March 13 |
| Elliott | | | March — |
| Estill | Walter Cox | Irvine | March 14 |
| Fayette | John Harvey | Lexington | March 13 |
| Fleming | J. B. O'Bannon | Flemingsburg | March 14 |
| Floyd | E. E. Martin | Allen | March 9 |
| Franklin | W. S. Snyder, Jr. | Frankfort | March 1 |
| Fulton | Glynn F. Bushart | Fulton | March 14 |
| Gallatin | J. M. Stallard | Sparta | March 15 |
| Garrard | B. Earl Caywood | Lancaster | March 15 |
| Grant | C. A. Eckler | Dry Ridge | March 21 |
| Graves | H. H. Hunt | Mayfield | March 6 |
| Grayson | R. F. Porter | Leitchfield | March 29 |
| Green | S. J. Simmons | Greensburg | March 5 |
| Greenup | Carl M. Gamhill | Greenup | March 9 |
| Hancock | F. M. Griffin | Hawesville | March 5 |
| Hardin | D. E. McClure | Elizabethtown | March 8 |
| Harlan | Clark Bailey | Harlan | March 31 |
| Harrison | W. B. Moore | Cynthiana | March 5 |
| Hart | S. F. Richardson | Munfordville | March 6 |
| Henderson | Walter O'Nan | Henderson | March 12-26 |
| Henry | Owen Carroll | New Castle | March 26 |
| Hickman | Chas. Hunt | Clinton | March 1 |
| Hopkins | David L. Salman | Madisonville | March 1 |
| Jackson | | | March 3 |
| Jefferson | Chas. M. Edelen | Louisville | March 5-19 |
| Jessamine | J. A. VanArsdall | Nicholasville | March 22 |
| Johnson | P. B. Hall | Paintsville | March 10 |
| Knott | M. F. Kelley | Hindman | March 24 |
| Knox | F. R. Burton | Barbourville | March 23 |
| Larue | D. V. Gaddie | Hodgenville | March — |
| Laurel | Oscar D. Brock | London | March 14 |
| Lawrence | L. S. Hayes | Louisa | March 19 |
| Lee | A. D. Hoskins | Beattyville | March 10 |
| Leslie | John H. Kooser, Acting Secretary | Hyden | March — |
| Letcher | R. Dow Collins | Whitesburg | March 27 |
| Lewis | J. D. Liles | Vancebnrg | March 19 |
| Lincoln | Lewis J. Jones | Houstonville | March 16 |
| Livingston | Wm. C. Davis | Salem | March — |
| Logan | Walter Byrne, Jr. | Russellville | March 5 |
| Lyon | H. H. Woodson | Eddyville | March 6 |
| McCracken | Leon Higdon | Paducah | March 14-21 |
| McCreary | R. M. Smith | Stearns | March 5 |
| McLean | W. W. Spicer | Calhoun | March 8 |
| Madison | J. G. Bosley | Richmond | March 15 |

| COUNTY | SECRETARY | RESIDENCE | DATE 1932 |
|---|---|---|---|
| Marion | H. R. Wilbur | Lebanon | March — |
| Marshall | S. L. Henson | Benton | March 21 |
| Mason | Allen F. Murphy | Maysville | March 14 |
| Meade | A. A. Baxter | Brandenburg | March 22 |
| Menifee | E. T. Riley | Frenchburg | March — |
| Mercer | J. Tom Price | Harrodsburg | March 13 |
| Metcalfe | P. W. Bushong, Acting Secretary | Edmonton | March 6 |
| Monroe | Geo. E. Bushong | Tompkinsville | March — |
| Montgomery | D. H. Bush | Mt. Sterling | March 13 |
| Morgan | W. H. Wheeler | West Liberty | March — |
| Muhlenberg | G. L. Simpson | Greenville | March 13 |
| Nelson | R. H. Greenwell | Bardstown | March 21 |
| Nicholas | T. P. Scott | Carlisle | March 19 |
| Ohio | Oscar Allen | McHenry | March 7 |
| Oldham | S. J. Smock | LeGrange | March 6 |
| Owen | K. S. McBee | Owenton | March 1 |
| Owsley | D. E. Wilder | Booneville | March 5 |
| Pendleton | W. A. McKenney | Falmouth | March 14 |
| Perry | R. L. Collins | Hazard | March 12 |
| Pike | M. D. Flanary | Pikeville | March 5 |
| Powell | I. W. Johnson | Stanton | March 5 |
| Pulaski | M. C. Spradlin | Somerset | March 8 |
| Robertson | | | March 19 |
| Rockcastle | Lee Chestnut | Mount Vernon | March — |
| Rowan | G. C. Nickell | Morehead | March 27 |
| Russell | J. B. Scholl | Jabez | March 12 |
| Scott | F. W. Wilt | Georgetown | March 1 |
| Shelby | W. E. Morris | Shelbyville | March 15 |
| Simpson | N. C. Witt | Franklin | March 13 |
| Spencer | | | March — |
| Taylor | W. B. Atkinson | Campbellsville | March 8 |
| Todd | B. E. Boone, Jr. | Elkton | March 7 |
| Trigg | H. L. Wallace | Cadiz | March 28 |
| Trimble | | | |
| Union | D. C. Donan | Morganfield | March 28 |
| Warren | Hal Neal | Bowling Green | March 14 |
| Washington | J. H. Hopper | Willisburg | March 21 |
| Wayne | R. E. Teague | Monticello | March 1 |
| Webster | C. M. Smith | Dixon | March 30 |
| Whitley | C. A. Moss | Williamsburg | March 1 |
| Wolfe | G. M. Center | Campton | March 5 |
| Woodford | Chas. F. Voigt | Midway | March 1 |


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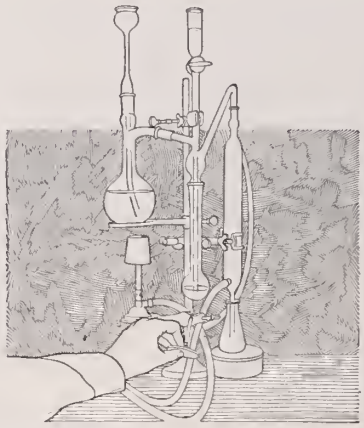
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# KENTUCKY MEDICAL JOURNAL

BEING THE JOURNAL OF THE KENTUCKY STATE MEDICAL ASSOCIATION

**Published Under the Auspices of the Council**

VOL. 32 NO. 3 BOWLING GREEN, KY. MARCH, 1934

## DOCTOR J. L. ATKINSON

Always prominent amongst the physicians who served the people of Kentucky was J. L. Atkinson of Campbellsville.

Doctor Atkinson was graduated from the Medical Department of the University of Louisville in 1887. He died on January 29, 1934. He was a member of the county board of health of Taylor County rom 1882 to 1919 and was Medical Referee from 1890 until his death. He was a member of the House of Delegates of the Kentucky State Medical Association for more than twenty years. He was twice elected First Vice-President of the Association.

Doctor Atkinson was always in the first rank both as a physician and as a citizen. Quiet and modest, he was always thoughtful and courageous. His interest in the practice of medicine was the opportunity it gave for private and public service. He was loyal to his profession and to his friends. The fine service and leadership he gave to public health throughout his years of practice were given without a thought of personal reward. It is a sufficient tribute to his worth to say that hundreds were restored to good health by his ministrations and hundreds of others, most of whom never knew of the services of their benefactor, were saved from serious illness by his wise ministration in their behalf.

His memory will always be a proud heritage of the profession and people of the State. His very life bequeathed to all of us the fineness of spirit and of character which obligates us to him. In accord with the best professional practice, he has left his work in the hands of a son and of professional associates who are actuated by the same high ideals which made him an outstanding character amongst even the best physicians of Kentucky.

## EYESIGHT SWINDLERS

For several years past State Boards of Health and State Boards of Medical Examiners have been reporting activities within their several jurisdictions of eyesight swindlers. In several instances, these swindlers have been detected, forced to disgorge the considerable sums mulcted from unsuspecting citizens, and made to suffer punishment in some degree commensurate with the gravity of their offenses. The activities of these harpies seem, however, to continue, with change only in the scenes of their operations.

Until recently Kentucky appears to have escaped this particular class of fakers. It appears, however, from a report recently coming from a practicing physician in Logan County, that the people of this State also are likely to become victims of these swindlers who prey upon human infirmities and weaknesses, unless general and concerted efforts are put forth to stop their nefarious activities at the very beginning.

The modus operandi employed in the case just reported is the same, in all essential regards, as that used in other states where the fakers have operated. An offer is first made to treat the eyes with an alleged radium water, for which a charge of several hundred dollars is collected in advance, with the understanding that this charge is to be refunded in full unless a permanent cure is obtained within a definitely stated time. Before the expiration of the period, a second member of the confidence gang puts in his appearance, explaining that the man who first called has been killed in an automobile accident, but that he has a radium belt which is uniformly infallible. This belt, it is explained, is the only one of its kind in existence and therefore is not for sale. However, it may be rented, provided a deposit sufficiently large to guarantee its return is made in advance. Of course the individual making the offer never returns for the belt and the deposit is lost.

Strange as it may seem, there appears to be, even in this enlightened age, no scarcity of gullible individuals who believe that cataracts can be removed by means of fake radium water dropped into the eyes, and that dimness of vision can be completely cured by wearing an alleged radium belt purchased at an outrageously extortionate price. Citizens of the State in general, and members of the medical profession, in particular, are warned to be on the lookout.

## THE HARLAN MEETING

The physicians of Harlan county have selected October 1 to 4 as the date of the Annual Meeting. At this season of the year the mountains are in their most beautiful mood, the first breath of autumn turns the green into all hues of the rainbow, the air is crisp and cool. Ample hotel accommodation will be provided by every one in attendance.

## HYGEIA

The JOURNAL again desires to direct attention to the splendid service which the American Medical Association is rendering to the profession in publishing HYGEIA and to urge the widest possible utilization of this service by physicians in Kentucky. Whatever appears in the pages of this magazine may be safely accepted as authoritative. Contributors are, almost without exception, men and women who are specialists in the various subjects which they undertake to discuss. This makes HYGEIA of tremendous value, to the practicing physician in particular and to the public in general, in this day when the public is being fairly deluged with all sorts of "health advice" and "short cuts to health," through newspapers, magazines and the radio, and by quacks, cultists and irregular practitioners. HYGEIA prominently displayed on the reception room table for the use of waiting patients will go far toward counteracting false health propaganda.

Just now HYGEIA is offering a premium with each annual subscription. Send in your name and address, and a copy of HYGEIA, together with the premium, will be promptly forwarded to you. If you decide not to subscribe, return the premium and keep the copy of HYGEIA. The subscription price is $3.00 per year. Address the American Medical Association, 535 North Dearborn Street, Chicago, Illinois, for full particulars.

## TO OUR MEMBERS

Again we are called upon to issue the annual reminder to members of the Association that dues for the current year must be paid in time to reach us on or before April 1st, if there is to be no interruption in their receipt of the JOURNAL. The matter is one in which we have no discretion. The postal laws make it mandatory upon us to drop the names of all who are in arrears on that date.

It is gratifying to note that, even in these difficult times, the membership of the Association is keeping approximately at a normal level. It is earnestly to be hoped that there will be no falling below that level this year. Never in the history of the Association were the problems confronting organized medicine more complicated or more fraught with potentialities for good or bad than they are today. It, therefore, behooves us to be as fully and as closely organized as possible, if the solutions of these problems are to be such as shall insure best results for the profession and for the people of the State who are dependent upon the profession for the protection of their health and their lives.

Aside from this, it is very important for physicians to keep themselves continuously in good standing, both in their respective local societies and in the State Association. Only in this way, can they be assured of receiving the JOURNAL regularly and of uninterrupted protection against suits charging malpractice. Several instances could be cited where negligence or carelessness in the latter particular have proved costly in the shape of attorney's fees. No doubt, many members who have not yet paid their dues intend to do so shortly. Why not send in the remittance at once? From the standpoint of economy alone, membership in good standing may prove worth many times the financial outlay entailed; the professional value of contacts so maintained is not to be measured in terms of money.

## SCIENTIFIC EDITORIAL

### SIGHT SAVING CLASSES

Blindness has ever made an appeal to those who endowed with the sense of vision are able to enter into intellectual and economic pursuits and to enjoy the beauty of their surroundings. There were days, not so far distant, when the unfortunate victims of blindness, most of them indigents, many of them beggars, and some of them criminals, were accepted as economic charges and social outcasts. However, with the increasing enlightenment of the world, conditions have changed until now many of those deprived of their visual functions are educated in the use of Braille type and in various industrial pursuits, thus enabling them to participate in gainful employment and social contacts, and thereby elevating them to a state of independence and contentment. Nothwithstanding this more sanguine condition of the blind, the result of educational measures, which are being administered with increasing efficiency throughout our country, it would seem that the preventive measures should still play the most important part in our welfare work as applied to the problem of blindness. The medical profession has led the way in establishing and administering means of preventing blindness. As evidence one need only note the great decrease in blindness resulting from gonorrhoeal infection of the eyes of the new born since Crede in 1869 introduced his prophylactic treatment of instilling nitrate of silver solution into the eyes of all new born babies; also the decrease in blindness from Trachoma since the federal government has established treatment centers in areas most infected with trachoma and the saving of eyes otherwise lost through luetic and gonorrhoeal ocular lesions, by virtue of prenatal treatment of expectant mothers.

Industrial precautionary measures such as

the employment of protective devises to safeguard workers in factories and educational measures applicable to children at play regarding the careless use of firearms, dangerous playthings, such as pointed knives, scissors, etc., have cut down the frequency of accidents, and thus reduced the relative number of the sightless population. A very important step in further reducing the number of our blind is the study of the hygiene of eyes of the growing child. In this regard we are indebted to Dr. Frank Alport for introducing in the schools a systemic inspection of all school children's eyes and suggestions regarding the needs of the defectives. His suggestions of some 40 years ago were generally adopted in the schools especially in the larger cities and have been rewarded with perceptible results in the preservation of vision. In addition to these manifest results of routine examinations of the eyes of children during the adolescent years, it has brought to light the necessity of employing special methods of instruction for a small though definite group of children who on account of ocular defects can not keep up with regular classes without jeopardizing their ultimate visual acuity, or in a few instances even leading to blindness. Classes to supply such specialized instruction were first organized in England in 1908. Five years later sight saving classes were instituted in this country in Boston. Since then the movement has grown rather rapidly until today we find sight saving classes operating in nearly all of the larger economic centers of our country. Such classes are conducted by regularly qualified teachers who have taken post graduate work to fit them for this particular field of instruction. Centers for such post graduate teaching had been established in various teaching centers, such as Cincinnati, Chicago, New York, New Orleans and others. A teacher is usually able to take care of about 20 pupils. The work is done in school rooms of good size, centrally located, and especially arranged for children with defective eyes with proper lighting and ventilating systems and with matt-finish of walls and ceiling devoid of glare. They are equipped with adjustable and movable desks and chairs and with special working paraphernalia such as unglazed paper, large lead pencils, books with large clear type now being published for this special purpose, outline maps, large charts and with typewriters.

The object of sight saving classes may readily be misinterpreted. Its purpose is to take care of that small group of pupils—estimated approximately as one in every five hundred pupils—whose vision is either quite defective from various causes such as corneal disease or deformity, choroidal and retinal disease, high degree refractive error, etc. Children with 20-70 vision or less in the best eye—in whom the use of the eyes would tend to exaggerate the condition or those with that serious condition known as progressive myopia in whom the over use, or what might be construed as the normal use of the eyes is believed to be a potent factor in the increase of the myopia.

The classes are in no way intended to take care of the unfortunate children whose eyes have already reached a very low degree of visual acuity (less than 20-200 in best eye) who are subjects for the Kentucky School for the Blind; nor are the classes intended for the large proportion of children who have errors of refraction but who can obtain comfort and efficiency by the use of correcting glasses, or for children with only one highly defective or blind eye.

As far as is known to the writer there are at present no sight saving classes functioning in Kentucky. In Louisville the Board of Education has had the question under consideration for some time and notwithstanding the economic duress under which all municipal boards are at present laboring, are now with the cooperation of the Louisville Eye and Ear Society, investigating the feasibility of establishing at least one class, as a trial class in Louisville. The Board of Education is deserving of the commendation of the community in this forward movement.

ADOLPH O. PFINGST

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**Influence of Bone Extract on Healing of Fractures.**—Hoffmeister points out that drugs as well as tissue extracts have been recommended for poorly healing fractures and for pseudo-arthroses. He mentions various bone extracts that have been tried by other investigators and then states that, in collaboration with Rothenheim and Teichmann, he has prepared a protein-free extract from the epiphyseal tissues of the bones of growing animals, and that he has used it in a large number of fractures in the last two years. He injects once every week from 1 to 2 cc. of the extract into the cleft of the fracture and under the periosteum, whenever the formation of callus is retarded or when a pseudo-arthorsis has developed. The number of injections is determined by the progress in healing. The author asserts that he obtained favorable results with this extract, but he advises that it should not be used until eight or ten weeks has passed since the fracture occurred, because in new fractures it seems to retard rather than accelerate the healing process. It is mainly effective in old fractures in which the new formation of bone has ceased and needs stimulation.

## ORIGINAL ARTICLES

### SYMPOSIUM ON CONTAGIOUS DISEASES

### SCARLET FEVER*

J. Wilbur Armstrong, M. D.

Berea.

Since 1924 when the two Doctors Dick satisfied Koch's Postulate in regard to the cause of scarlet fever we have been able to meet the threat of this disease in a scientific manner. They found the cause to be certain specific strains of hemolytic streptococci. Scarlet fever is transmitted largely by the secretion of the nose and throat of an infected person, or through infected discharges, such as a draining middle ear. More rarely it is transmitted directly through contaminated articles. Fortunately scarlet fever has a relatively low degree of contagion, but food supplies, especially milk, have become contaminated with resulting serious epidemics, explosive in type. There is danger in the existence of the carrier state not only from the convalescent patient but in immune contacts. These together with frequent mild undiagnosed cases, are responsible for the sporadic occurrence of scattered cases that crop up for months in a community. This makes epidemic scarlet fever difficult to control. During an epidemic any person with a sore throat should be checked for the carrier state, also all contacts with known cases should be checked and those with positive cultures of hemolytic streptococci should be kept in isolation until they clear up, or are proved to harbor some innocent strain. Cultures are made on blood agar plates, if these are not available fairly accurate findings result from cultures of the naso-pharynx on Loeffler's media sent to the laboratory after short incubation and transferred to the blood agar there.

It is unnecessary to recount the clinical course of so familiar a disease. Local symptoms develops in the throat, usually with tonsillitis, but the toxic manifestations are due to a soluable exo-toxin that is formed by these organisms. Like most streptococcic infections it has a brief incubation period, and a quite sudden onset. The appearance of the typical rash occurs within twenty-four to forty-eight hours.

We fear scarlet fever not because of these symptoms but because of its squellae and complications. Even the mild cases may be attended by severe complications and followed later in life by a still more serious outcome. Many who survive are crippled to various degrees, for life. We have such complications as otitis media, mastoiditis, arthritis, but most dreaded are the complications involving the heart and kidney. It is because of these complications that we must do all that we can to prevent scarlet fever.

We have a valuable aid in our therapy for scarlet fever in a specific anti-toxin. This modifies all the symptoms of the disease, hastening recession. Anti-toxin is indicated in all severe cases. The toxin seems to appear in the patient early in the disease and if it is to be combated successfully it must be met early by an adequate amount of available anti-toxin. As in a case of diphtheria anti-toxin, its value is in direct relation to the time of administration. The earlier given the more effective it is. Human convalescent serum if available in sufficient quantity is equally valuable. Rarely an unusual strain of the scarlatina streptococcus is met, that the usual antitoxin does not combat. The commercial antitoxin and convalescent serum are also effective for temporary passive immunization of susceptible contacts with the disease. Other than this specific treatment we give symptomatic treatment as indicated with stress laid on the rest in bed and close daily observation for the development of any complications which may appear and for which prompt treatment should be instituted.

But we realize in our medical practice, prevention is much more important than treatment, so adequate isolation or quarantine of cases and carriers is necessary. The only safe determination for a time of release is when cultures from the naso-pharynx are negative. We should make wider use of these throat cultures on blood agar media. We find some cases harbor the organisms five to six weeks.

We have in the Dick Test a reliable indicator of susceptibility to scarlet fever, but to be reliable the proper technique must be used. This includes the use of proper equipment of syringes and needles adapted to this work and the protection of a potent toxin solution from any possible contact with alcohol or other solution that may precipitate it. We must be sure when we give the test that the needle used is full of the toxin and not filled with water from the sterilizer. We can be sure if a small amount of solution is ejected through each fresh needle. Exactly one-tenth of cc must be placed intradermally. With all these factors closely observed we may fully rely upon the findings twenty-two to twenty-four hours later when we read the tests. In case of an epidemic those susceptible should be immunized. In the average community it

*Delivered before the Kentucky State Medical Association, at Murray, September 11, 12, 13, 14, 1933.

is practicably impossible to locate all carriers and isolate them but isolation to the fullest extent possible may stop the immediate progress of an epidemic, but in addition active immunization of susceptibles is the logical procedure, in order to prevent the sporadic out break of new cases during the following months.

Various methods of immunization have been tried, but the technique recommended by the Dicks is the only one extensively employed and is the only one that has stood the test of time. Much of the controversy in regard to the value of this immunization has resulted from the use of improper preparations or inadequate dosage. The early use of small doses of toxin was found to be inadequate, yet we still see small doses administered with continued unsatisfactory results. The large doses recommended by the Scarlet Fever Committee have always been effective in the control of this disease. This method employs five doses of toxin working up to a final dose of eighty thousand to one hundred thousand skin test units.

There are certain disadvantages that are met. Co-operation in an immunization program is difficult when five injections and two skin tests must be made. Then too, a small per cent have distressing although not serious reactions. In our experience at Berea over 70 per cent have had no reaction beyond the local one at the sight of injection. Apparently children are not as apt to have reactions as adults. Those with the most marked and the largest Dick Test, probably the most susceptible group, usually had the greatest reaction, and those also seem to have failed to hold their immunity as well as the others. It is very important to immunize to the point of a negative Dick test before assuring the patient that he is protected. No matter what the immunization method has been, no person should be considered immune until a negative Dick test has been obtained. Apparently some few never reach this stage. Our results at Berea with the five dose method, or five doses with a sixth dose for those who were not negative at the end of the fifth are as follows:

We have given 5359 individuals Dick tests 16 per cent of which were positive. We have immunized 562 individuals with the five dose method of the Scarlet Fever Committee. About 97 per cent of these showed a negative Dick test after the fifth dose.

19 individuals who had been positive and not immunized, later showed a negative test (so-called spontaneous negative), and ten who had previously been negative later showed a positive test.

Of those immunized in 1929, 68 who were retested in 1930 were negative, 16 retested in 1931 were still negative, and 28 retested in '33 were still negative.

We have a record of 14 who had been immunized to a negative test and who later became positive, losing their immunity. One one year later, two two years after immunization, two three and seven, four years after immunization.

No individual who has been immunized has developed scarlet fever. Since 1928 we have had in the college only 8 cases of scarlet fever. Seven of these were individuals who knew they had positive Dick tests but had not been immunized. The other case occurred in 1931 in a student who had had a negative Dick test in 1930. We believe the 1930 test must have been improperly done, or that the infection was caused by some unusual strain of the organism.

Repeatedly the value of such immunization work has been demonstrated in institutions. It should be compulsory for all nurses and medical students. The number of doses and reactions make for difficulty in general practice but we can depend on the results. Where our patients have full confidence in us we will meet little opposition. Dr. Bull's report in the J. A. M. A. tells of the successful use of a letter from a general practitioner to his families explaining the possibility of securing immunization.

Dr. Dick reports retesting of persons immunized six years ago, over 90 per cent of these are still immune and none have had scarlet fever in the interval and no spontaneously negative test has become positive. Bull of New York recently reported retesting fifty children immunized eight years ago when the much smaller doses of toxin were used and still found 64 per cent holding their immunity.

Many attempts have been made to modify the toxin in various ways. The ricineolated antigen proved ineffective. Toxin has also been treated with formalin but apparently the scarlet fever toxin differs definitely from the diphtheria toxin. There is a question whether we can ever have a scarlet fever toxoid. Veldee of the U. S. Public Health Service has reported a small series of cases treated with a formalinized toxin. This group as reported shows fewer individuals with reaction and those reactions less severe. He reported 96 per cent of his group rendered Dick negative, however his numbers were not extensive enough to draw definite conclusions, and we do not know whether the immunity conferred is lasting or not. Eventually we hope some way will be found that we can rely upon to give a consistent high degree of immunity without reactions and by means of fewer doses. Another study with a small

group of cases was made by Martmer of Michigan who used an inunction method of immunization. By rubbing 25,000 skin test units into the skin every other day 47 per cent of 90 patients were made Dick negative, while 94 per cent given 30,000 skin test units every five days became Dick negative within six months. No systematic reactions occurred.

We had three nurses who had a positive Dick test about the time this report was published. They were interested in the report and desired to try out this method of immunization. They were given five doses of between twenty-five and thirty thousand skin test units at seven day intervals. Two of these were Dick negative within three months and the other who had had a very large bright swollen reaction at the time of the first test had this reduced to a smaller fainter one. Again retested at three months later she was still positive. About this time we gave the Schick, Dick and Tuberculin test to thirteen hundred of our students and offered to give those susceptible to scarlet fever, immunization by this inunction method as an experiment. Some forty volunteered. They were divided into pairs and the members of each pair rubbed each other with the toxin, rubbing the toxin into the back, getting of course some absorption also through the hand. Several had a slight papillary eruption on the back and one had a temporary enlargement of axillary lymph nodes. Fourteen retested within two months were still Dick positive and none had become negative. We plan to retest all of those given this immunization treatment at six months to see if these findings hold. Dr. Meader of Detroit also reports irregular results from this method. Results of these modified methods show us that if we desire to produce active immunity we must still rely on the technique that our State Board of Health has prepared for us under the direction of the Scarlet Fever Committee.

### Conclusions

(1) Although severe cases are not commonly seen today scarlet fever is still a dangerous menace through its complications.

(2) Epidemic scarlet fever is difficult to control without carrying out a campaign to secure active immunity.

(3) Successful lasting immunization is possible.

(4) The technique of immunization as recommended by the Scarlet Fever Committee remains the only reliable method of active immunization, various modifications having failed to stand the test of time.

## DIPHTHERIA*

R. K. Galloway, M. D.
Henderson.

Because of the brief time allotted to the discussion of diphtheria, we shall attempt to present what might be considered the most important practical aspects of the disease, and about which there is least controversy. Is diphtheria still a problem in Kentucky?

Deaths from Diphtheria in Kentucky

| 1921 | 1922 | 1923 | 1924 | 1925 | 1926 | 1927 |
|---|---|---|---|---|---|---|
| 652 | 498 | 357 | 247 | 272 | 322 | 239 |

| 1928 | 1929 | 1930 | 1931 | 1932 |
|---|---|---|---|---|
| 277 | 262 | 240 | 389 | 371 |

Diphtheria is a specific disease due to Klebs-Loeffler bacillus, which enters by the mouth or nose and the lesions are usually localized in the membranes of the throat, nose, larynx, or upper respiratory tract. The bacilli remain in the local lesion where they grow and multiply. The period of incubation is from two to seven days, most usually two or three. Diphtheria often begins insidiously without pain or local indications and with little or no fever. The disease may exist several days before it is noticed. Most usually a local inflammatory reaction is elicited by the diphtheria bacilli, characterized by coagulation, necrosis, fibrinous exudate, and the formation of a membrane. In attempting to make a diagnosis of these visible pathological changes by inspection, the clinician should remember that the pseudomembranous inflammation characterized by its adherence to the submucosa and the bleeding points it leaves, is not absolutely pathognomonic of the diphtheria bacilli, but means simply a very violent inflammatory reaction, and that, while this condition is most commonly caused by the diphtheria bacillus, many other severe inflammations may give rise to similar appearances. Thus, a severe streptococcus infection of the throat may simulate a diphtheritic membrane. Or, a diphtheritic inflammation may often be associated with other infectious processes as a superimposed streptococcus infection will change the appearance both of the local lesion and of the general clinical picture and is apt to lead to greater severity of the illness. Another common experience is to find at the site of the inflammation an ulcerative process which will yield the fusiform bacilli and spirilla of Vincent's angina. A rare pathological condition that will simulate diphtheria is the syndrome "agranulocytic angina." Thus, on inspecting a sore throat for diagnosis, we need to consider: follicular tonsillitis, or streptococcus infections, including the scarlet fever strain,

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Vincent's angina, agranulocytic angina, diphtheria, or a combination of diphtheria with any of the above. The clinician should at the outset, if he is strongly suspicious that he is dealing with a diphtheria infection, immediately administer a large dose of antitoxin, at the same time, taking throat cultures and smears to determine what specific infection or infections are present. So that, in 24 hours if the patient is not improved after receiving the antitoxin, the laboratory can come forward with a report of: no diphtheria found, but Vincent's or hemolytic streptococci present, and the doctor can then proceed with correct specific treatment. Where the doctor cannot have this laboratory aid at hand, he should decide from the clinical picture, and he will display good judgment by administering antitoxin to all strongly suspicious cases.

The general symptoms of diphtheria are due to the action of the toxin absorbed from the lesion, and it is the toxin which determines the systemic characteristics of the disease and constitutes the most frequent cause of death. Of the damages wrought by this toxin in children surviving, paralysis is by far the most important sequela. Paralysis of the palate, of the eye-muscles, respiratory muscles and later, those of the extremities may be looked for sometime after the third week and as late as the ninth or tenth. Injuries to other organs are apparent in albuminuria due to acute interstitial nephritis, and cloudy swelling of parenchyma cells in other organs, especially the suprarenal glands. Action upon the heart is not apparent before the ninth day, but from then on is an important factor, as fatal dilatation may come on as late as the sixth or seventh week. It has also been observed that very mild cases of diphtheria which were inadequately treated with antitoxin, or milk sore throats, not diagnosed as diphtheria and hence not treated, have often produced these crippling sequelae after convalescence was apparently certain. Antitoxin will not counteract those toxins that are already fixed with the tissues of the body, but will only neutralize the free toxin that is floating in the circulation. Hence: administer antitoxin early, in one large dose, no case should have less than 20,000 units, perferably 40,000 units, given intramuscularly (in the buttocks): more severe cases or those not seen until late, given 80,000 to 150,000 units, half of this being given intravenously, the other half intramuscularly. At no time should antitoxin be given subcutaneously. The other important phase of treatment in the behalf of cure and prevention of injurious sequelae is that all cases including the mild, receive bed rest for at least three weeks.

The most usual prevalence of diphtheria is during the winter season between the middle of November and the middle of February. Any abnormal condition of the mucous membrane of the throat and nose favors the localization and penetration of the diphtheria bacillus. Children with scarlet fever or measles are especially prone to take diphtheria if the infection is around. The bacillus leaves the body in the discharges from the mouth and nose. It has less resistance to adverse conditions than the majority of the spore free bacteria. It is more readily destroyed by light, heat, and disinfecting substances than the typhoid bacillus. Only when enclosed in the false membrane or other albuminous substances will they remain virulent for some months. It is not killed by freezing.

Diphtheria infection may be conveyed indirectly by inanimate objects, as toys, that have been freshly contaminated by the infected child and then mouthed by the susceptible child; but, diphtheria is spread mostly by the active cases, recent convalescents, mild and missed cases, and carriers. Practically speaking the latter two are most important. The carriers may either be temporary or chronic. Convalescent diphtheria cases usually get rid of their bacilli spontaneously within one, two or three weeks. Healthy individuals exposed to cases or carriers, as a rule do not keep their organisms more than either a few days or a few weeks, depending perhaps to some extent upon the conditions of their mucous membranes. A small percentage remain chronic carriers. The dangerous carrier is he who harbors the virulent strain, and this is usually obtained from the patient, convalescent, or from a third person who has come in contact with the patient. Hence for sanitary isolation of an infectious case, we must have concurrent disinfection, plus the precaution of attendants keeping out of droplet range of the patient. The old procedure of the mother, doctor and other necessary attendants changing their clothes after contact in the sick room, should be superceded by the worth while technique of wearing a mouth and nose mask while serving the diphtheria patient.

When the doctor finds a case of diphtheria in a home where there are other young children, he is confronted with the problem of what he shall do to protect the others. If the home is accessible for return visits, he should isolate the patient in the home and begin active immunization with toxoid of those whom he might think to be susceptible. In this way he will begin establishing within them a permanent immunity, and from his daily visits can observe their throats that should one show diphtheria, he can promptly administer antitoxin. However, if the case

exists in a home that is far remote and difficult to reach, then he may be justified in giving the contacts 1,000 units of antitoxin that will give them a passive immunity for perhaps two to four weeks.

Most infants when born have an immunity against diphtheria which they lose by the time they are one year of age. Their most susceptible time is then between the age of one and six. Most of our diphtheria cases occur under six years of age, over eighty per cent of diphtheria mortality being in the age group from one to five. A clinical attack of the disease does not always give a permanent immunity. The best method of securing active permanent immunity is by the injection of toxoid (treated diphtheria toxin). By means of this agent the medical profession has in her possession the power of eradicating forever this much dreaded disease. To secure the full benefit of this protective agent it should be given to the baby between six and nine months of age, one cc at a two weeks interval for two doses. When the child is not seen till in late preschool or school age, then it is better to give him the Schick test (every doctor should know this technique), and then give the toxoid if necessary; the dosage of the toxoid would be the same as that given the baby. This method will insure protection for upwards of 95 per cent of children.

Quite an evolution is going on in the laboratory in the way of concentrating toxoid. Before long we may expect to have on the market an alum precipitate toxoid that will confer the same degree of immunity following the injection of only one dose of 1 cc of the product. The laity for a long time have known the fear and dread of diphtheria. May we not cause them to become just as well informed that they can be freed of this disease.

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**Gastritis After Resection for Ulcer.**—Zukschwerdt and Zettel made a histologic study of sixty-six resected stomachs. They found a pronounced gastritis in every case. Forty-four of the patients were subjected to a clinical and roentgenologic folow-up study. In many cases the gastritis could be diagnosed from roentgen studies. The patients ,however, presented as a rule no complaints. The fact that complaints may be present or absent while the anatomic picture is the same suggests the importance of psychic elements. The indication for a gastric resection in a neurotic ulcer bearer calls for much care. While gastritis can undoubtedly produce symptoms, the authors feel that it will eventually, as in the case of adhesions, be consigned to the fate of a passing fashion.

## ANTERIOR POLIOMYELITIS*

FRANK CAMPBELL, M. D.

Somerset.

This brief paper on anterior poliomyelitis is presented in the hope that it will stimulate discussion by those who are best qualified by virtue of their clinical knowledge or specialized laboratory training. At this time of the year, especially, "Infantile Paralysis" is a subject of dread to thousands of parents. Its dramatic course and our inability to reassure our patients as to specific treatment and prevention is conducive to mass hysteria during epidemics which is unequalled in any other disease of this continent.

The infective agent, is a filterable virus which is present in the nose and throat secretions of those suffering from the disease in its various forms. This is proven by the fact that it is possible to produce a similar disease in monkeys by the intrathecal injection of such filtrates or by nasal swabbing. Whereas, it was formerly thought that this disease was highly selective and that very few were susceptible, it is now generally believed that it is almost as communicable as measles, but that only fifteen or twenty per cent show involvement of the nervous system.

It is thought to be disease of direct contact although several milk borne epidemics have been recognized. Its prevalence in the late summer and fall is hard to explain from an epidemiological standpoint. It has been suggested by Aycock that this may be a physiological process whereby the body is unable to adjust itself at this time of the year to such an infection. This assumption is based on the fact that animals vary in susceptibility to experimental infections at various seasons. Some endocrine dysfunction may be a factor. Be that as it may, it would be hard to reconcile this suggestion with the presence of an epidemic in New York City in 1931 with practically no cases in Philadelphia, whereas the situation was reversed in 1932.

You are familiar with the pathology of this disease in its nervous manifestations. Suffice it to say that the anterior horn region of the cord is mainly involved, either by oedema or in the more severe cases by actual hemorrhage. Where the medulla is affected, we have the serious bulbar type with involvement of the respiratory and vaso-motor centres. The microscopic picture shows degenerative changes in the anterior horn cells although there is a generalized infiltration of neutrophilis at first, and later lymphocytes through-

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out the cord. This invasion of the spinal cord presumably comes by way of the blood stream and lymphatics.

In its early stages, anterior poliomyelitis is very hard to diagnose. Its presence may often by suspected by the age, by the season, and be the geographic distribution. The first manifestations are those of a systematic infection, evidenced by sudden onset, moderate fever with generally some gastro-intestinal symptoms such as nausea and vomiting, sore throat, headache, drowsiness and irritability. These could all be classified under the heading of "Summer Flu," a diagnosis we are all prone to make at times for want of a better one. This condition generally lasts for several days following which there is a period of apparent general improvement lasting two or three days to be succeeded by symptoms of invasion of the nervous system. From this time on, it may be possible to make a diagnosis on history, physical signs and examination of the spinal fluid. The temperature is moderately elevated. McNamara states that "Photophobia, retention of urine, localized sweating, tremor of hands do not occur in every case; but any one of these is a valuable warning. Constipation is usual." The patient is flushed and drowsy. When awakened however, he is alert and apprehensive.

The physical signs are variable. The most constant and valuable, according to most observers, is the so-called spine sign. This consists of tenderness and rigidity in flexing the back. This is best elicited in a child, after gaining his confidence, by having him attempt to kiss his knee while in a sitting position. In spite of the promised reward or other inducements, he will be unable to do so because of the tenderness in his back. This spine sign is generally associated with Amos' sign whereby the child sits in a tripod like position with the hands placed backward with hyper extension of the spine. Neck rigidity is variable, but the Kernig and Rabinsky signs are not constant. The deep tendon reflexes are generally exaggerated early with loss of the superficial abdominal refexes. Hyperesthesia may be present. These pre-paralytic signs may be present for a period varying from one to six days. In many instances the condition may clear up without paralysis or weakness. In others, weakness of various muscle groups may occur, to be succeeded by paralysis of varying degree. Many observers feel that the majority of cases does not pass beyond the stage of systemic infection and this of course makes control measures difficult. Certain investigators, notably Wickman, Kling, Taylor and Amoss, and Paul and Trask have described these so-called abortive cases and in some instances have succeeded in isolating the virus from the throat of such patients.

In the stage of systemic infection, it is thought to be unwise to do a spinal puncture which might tend to affect the integrity of the choroidomeningeal defense mechanism. In the pre-paralytic stage the fluid is clear, usually under slightly increased pressure and contains a slight excess of globulin. This is increased in amount later. The cell count may vary from twenty to five hundred cells. There is a preponderance of neutrophiles early, but later in the pre-paralytic stage an excess of lymphocytes is noted. The spinal fluid in several other conditions may simulate anterior poliomyelitis, notably encephalitis and tuberculous meningitis. In the latter, however, there is a decrease in the chlorid content, the cells are chiefly lymphocytes, a pellicle forms on standing, from which the organisms may be identified on prolonged microscopic examination. The history of contact with tuberculosis and the chronicity of the case, as well as possible lung involvement, is helpful in differentiation. In encephalitis as a sequela to such diseases as whooping cough, measles, influenza and mumps, the history is all-important. In encephalitis, too, the sensorium is generally clouded and the patients are irrational and delirious. The typical cell early in encephalitis is the lymphocyte. The sugar content of the spinal fluid is increased, although the same may hold true for poliomyelitis. In encephalitis from drugs, lead for example, the temperature is generally not increased, although there may be paralysis. A history here of chewing the crib or painted toys is important, as is the x-ray examination of the long bones. Paralysis following diphtheria may be excluded by the history of acute illness weeks prior to the negative spinal fluid findings. A stiff neck may be associated with right upper lobar pneumonia or otitis media in children, but these conditions are generally discovered on careful physical examination.

The treatment of anterior poliomyelitis by the use of convalescent serum has not been so spectacular as in the case of measles, a somewhat analagous virus disease. While most investigators feel that it is of definite value, it is difficult to evaluate such reports, as in no given case may one definitely state that paralysis would have resulted had the serum not been used. It is, of course, impossible to use alternate cases only. The most encouraging reports have been those of McNamara and Morgan. According to their technique 50 c. c. of potent convalescent serum is given, a small amount intrathecally

and the rest intravenously in the pre-paralytic stage, followed in eighteen hours by 30-40 c. c. intravenously, if the temperature does not fall. The percentage of the more severe grades of paralysis in the treated cases was 5.2 as compared to 58.2 in the untreated cases. McNamara feels that these very favorable results may be due to the fact that larger doses were used, that the serum was of known potency, and also that the intravenous route was used and the dose repeated if the temperature did not fall within a few hours. This serum is prepared without the addition of an antiseptic and fibrinogen is removed, thus minimizing possible reactions. While most clinicians in the United States and Canada feel that the efficacy of the serum treatment has not been proven, yet very few are willing to disregard the possibility of benefit attending the use of it. Where convalescent serum is not available, citrated or whole blood may be used intra-muscularly from old cases of poliomyelitis or transfusions of blood may be used, preferably from several donors, in the hope that some anti bodies may be present in the blood of healthy donors. This is in accord with the work of Aycock and Kramer, and Fairbrother and Brown. It may be that the use of convalescent serum in the treatment of this disease has fallen into disrepute because of the small amount used and the lack of standardization. Once five thousand units of diphtheria antitoxin was considered an adequate dose; now, we use many times this even in mild cases.

During an epidemic, the supply of convalescent serum is too limited to be used for prophylactic purposes even among those exposed to definite cases. With this in mind over two thousand children were given parents' blood during the Philadelphia epidemic of 1932. The usual dosage was 30 c. c. in each buttock. Stokes reports that while the incidence of poliomyelitis was as great in this group as in the population generally, the percentage of resulting paralysis was much less. He feels that this is of great significance and that this therapy should be continued as the only hope for control, particularly where contacts seem likely. In nearly every instance where mild cases developed, the parents' blood showed a high antibody titer.

In the paralytic stage, an evaluation of all weakened or paralyzed muscle should be made at once as it is of the utmost importance to prevent the stretching of a weakened muscle, thus avoiding added months of convalescence. Muscle power should be tested against gravity and passive resistance, in estimating the degree of damage. A cradle should be used over a paralyzed leg and the leg itself should be kept in position by sandbags. As soon as the muscular tenderness has disappeared a bivalved cast may be employed. As muscle recovery takes place up to two years it would seem wise to follow conservative methods of treatment as long as possible. With returning strength, massage and swimming exercises may be advantageous. The buoyancy of the water allows weak muscles to perform their functions more easily than is possible otherwise.

In cases where there is respiratory paralysis the Drinker respirator has proven of value. Its benefits are most marked in weakness or paralysis of the intercostal muscles or the diaphragm. In cases of weakness alone, the stay in the respirator may be intermittent merely to rest tired muscles. Where there is paralysis due to involvement of the respiratory centre, this type of therapy is of little avail, probably only prolonging the inevitable fatal issue. In paralysis of the pharynx it is of some benefit but must be coupled with postural drainage, frequent aspiration and possible tracheotomy. In pharyngeal involvement the danger is an obstructed air way. Feeding by mouth is contra-indicated because of the possibility of aspiration into the lung. Venoclysis or other methods of administering fluids parenterally is indicated.

In conclusion, may I again commend to your attention the importance of early diagnosis of this disease; the possible benefits to be derived from the use of convalescent or adult serum in the treatment of the pre-paralytic stage or in prophylactic treatment of contacts, and the necessity of early and conservative treatment of the resulting paralysis.

## DISCUSSION

**Philip F. Barbour, Louisville:** Dr. Armstrong has had some very unusual opportunities to study scarlet fever from the standpoint of prevention. He is at the gateway of the mountains where the soil is practically virgin. The men who come from Berea come from a district that has not been touched by epidemics of scarlet fever, so these cases are practically virgin cases, and I think that the results of their treatment in the epidemic of Berea some years ago were a very high compliment to the efficiency of the work of the State Board of Health in the results that they obtained.

As a practicing pediatrician there are certain phases of the subject of scarlet fever which perhaps appeal more to me than the prevention. The sudden onset of scarlet fever, with headache, vomiting, rapid pulse and sore throat help you make your diagnosis in scarlet fever very promptly. I heard one of our excellent men in Louisville say at the Jefferson County Society one night that scarlet fever was one of the easiest diseases to diagnose that he knew.

A typical case of scarlet fever hardly anyone would miss, even the grandmother, but there are many cases of scarlet fever that are so mild and so evanescent, the symptoms are so unpronounced, that I think the diagnosis of a mild case of scarlet fever is really technically one of the most difficult things that we have to do in medicine.

One thing brought out in the epidemic at Berea was the fact that only 10 per cent of those cases that had scarlet fever organisms in the throat broke out with a scarlet fever rash, so that we shall have to consider in treating our sore throats, anginas of various types, that any angina is possibly a scarlatinal angina, and we should isolate all of our sore throats as promptly as possible to prevent infection being carried to other members of the family.

As to the matter of immunization, I think there is no question about the fact that the Dick five-dose immunization is complete and adequate and reliable.

Speaking from the standpoint of the general practitioner, I do not believe that it is always easy to have immunization done, nor is it always quite as pleasant and agreeable as Dr. Armstrong has painted it to us. He said that in 70 per cent of the cases they had little or no reaction. We don't have any trouble with those people who don't have any reaction. The trouble we have is with the 30 per cent that have sometimes quite a severe reaction. In an epidemic it is mighty easy to get people to run this risk, high temperature, pain, and the number of other symptoms that go along with it; it is quite another proposition when you are the family doctor and there is just one child in the family. If you get a severe reaction you are going to hear from those people—at least I do.

It would be a great thing if the Dicks or all the other workers in scarlet fever would elaborate some method by which we can be sure that when we give a dose of the toxin for immunization we are not going to get reactions to make the child sicker than scarlet fever would itself.

Perhaps this puts the matter a little bit too strong. I am heartily in sympathy with it, and I think it is a very valuable movement, but I have lost some families by getting pretty severe reactions, and I am a little timid about doing it in cases where the thing is not obligatory.

As to the severity of the symptoms, they say that a case of scarlet fever often begins very mildly and has pretty severe symptoms late. I think this is not the ordinary experience with scarlet fever. If a scarlet fever starts very mildly, the chances are that it is going to be a mild case; if it starts severely it is going to be a severe case. That is the rule. You can pretty well figure out from the amount of infection in the throat as to how severe the symptoms are going to be, and if you have a pretty severe angina, quite a marked infection there, or infection any place that is visible to you, or if the mucous membranes of the mouth and throat are intensely congested, you are apt to have a pretty severe attack. On the other hand, those cases with very little vomiting and fever, and no sore throat, in which the mucous membranes of the mouth are not definitely red, you know are going to be mild cases.

Antitoxin is certainly helpful in these cases.

**J. L. Jones,** Louisville: During the past few months we have been seeing some very severe, fulminating cases of Vincent's infection throughout the state. This is a condition with which a great many physicians are unacquainted, and because, as was pointed out by Doctor Galloway in his paper, it simulates diphtheria so closely, the question of a differential diagnosis is very difficult and oftentimes can only be made by the aid of laboratory examinations. Unfortunately many of our physicians neglect to utilize the services of a laboratory, diagnose these cases as diphtheria, administer the diphtheria antitoxin, but get no response to it. Unless the condition is finally recognized and the correct treatment for Vincent's infection instituted, the patient may go on and die. This has happened several times in the state.

Another matter I would like to comment on very briefly is the importance of rest in cases of diphtheria. To me it is a most pitiful circumstance to see a patient with diphtheria brought safely through the acute attack following the administration of antitoxin and then because the physician or family allowed him up too soon, suddenly die of acute dilatation. I know of several instances of this that have occurred in the state.

**Philip F. Barbour,** Louisville: I would like to make a statement that will be a source of gratification to us all. At the recent national meeting of the Parent-Teachers Association held at Seattle, Washington, our state was awarded a silver cup for having the largest percentage of children immunized against diphtheria of any state in the Union. That is the good work of our Parent-Teachers Association, linked up with the Child Welfare Department of our State Board of Health. I think we ought to feel proud of this compliment to the work we have done.

I should like to emphasize one or two points about diphtheria. The first is that diphtheria is essentially such a mild disease at the beginning and so fearful in its end results. I have seen children playing around the floor, many a time, with both tonsils covered with diphtheritic membrane, and it was difficult to save them from the results of the toxin.

The matter of keeping the child in bed for three weeks, as Dr. Galloway has suggested, I think is a very difficult matter, because these children, after you have given them antitoxin and they feel pretty well and have no fever, are not go-

ing to stay flat in bed; they are going to be jumping and kicking and struggling, and the consequence is they are going to be about as bad in bed as if they are up.

You can determine the condition of the heart pretty well if you watch it. You can anticipate heart failure if you will map out the size of the heart carefully each time that you go to see the child. If the apex of the heart keeps well within the nipple line you are not going to have very much myocardial degeneration, nor will you have heart-block, nor will you have death. If you find that your deep area of cardiac dullness is extending, if the heart is getting out beyond the nipple line, put that child in bed and keep the head down flat on the pillow until that has disappeared.

Dr. Galloway recommends 20,000, 30,000, 40,000 units. I think that is all right in a severe case, but the majority of cases of diphtheria I see need but 10,000 units as a sufficient dosage, and in these times of depression I think that is quite an element.

The rule used to be, with the membrane on one tonsil 5,000 units, on both tonsils 10,000 units as the minimum dose. Of course, if you have laryngeal involvement, get busy and give as big doses as you can get hold of.

**Arthur T. McCormack,** Louisville: Three-fourth of the deaths reported in Kentucky occur in the pre-school ages. We have a larger number of children immunized in Kentucky than in any other state, but we haven't yet arrived at the place where we are immunizing our children young enough, and the family physician must accept the responsibility for the immunization of the pre-school children. It is not done by health departments except for the indigent where they are requested to do so by the physician, and if the immunization is to be done early enough to get results it is to be done by the family physician, and that is the only way we are going to reduce our present death rate from diphtheria materially.

It has been demonstrated pretty conclusively by Godfrey's studies in New York that where as many as 30 per cent of the pre-school children are immunized an epidemic is impossible, but the individual child not immunized is still in danger, and I want to urge upon the practicing physicians of Kentucky that they recommend that they have the parents bring their children back to them at the ninth month for immunization and then that the Schick test be done at the end of the second year to be sure that the immunization is complete so that they know these children are immunized. When that time has arrived we will have eliminated the deaths from this terrific disease.

**J. L. Jones,** Louisville: As the essayist has suggested, the only way in which the tendency of poliomyelitis to manifest itself sporadically can be explained is on the assumption that it is a very mild disease in most instances, is a very infectious disease, similar to measles and chickenpox, and that almost everyone has an attack of it at some time or other, but because of its mildness in a majority of instances it is not recognized as such.

It is only in a small percentage of cases, it would seem, that the central nervous system is involved and the case goes on to paralysis; we see these paralytic cases occurring sporadically, and usually find it impossible to trace any direct contact between them.

Certain investigators who have had the opportunity of studying this disease under hospital and laboratory conditions, with all necessary facilities available, describe a symptom syndrome for the so-called pre-paralytic case. So far as the average physician is concerned, however, the diagnosis of the pre-paralytic case offers considerable difficulty. As a matter of fact, when the physician encounters a case that has gone on to the paralytic stage, he is still confronted with difficulties in the way of diagnosis, since the paralytic case of poliomyelitis must be differentiated from the various types of meningitis, from encephalitis, from brain tumor and various other conditions, referable to the central nervous system, and it may be several days before he can be sure on the basis of clinical manifestations that he is dealing with a case of poliomyelitis.

There seems to be considerable controversy as regards the value of poliomyelitis convalescent serum. I have recently reviewed the literature in connection with this matter, and so far as I can discern it seems to be the consensus of opinion that the convalescent serum is of no value in the treatment of the paralytic case, and of but doubtful value in the pre-paralytic case.

For several years we have tried to maintain a supply of convalescent serum at the State Board of Health Laboratory and have sent it out to physicians on request, but because of the difficulty of obtaining, standardizing and preserving this serum, and because of the growing skepticism as to its value, our enthusiasm in connection with recommending its use has become considerably dampened Certainly we are no longer recommending it in treating the paralytic case, however, we are trying to maintain a small supply so it will be available to physicians in case they diagnose the pre-paralytic type of the disease and want to use it. However, I feel that the use of whole blood, as has been pointed out by the essayist, offers a much more practical procedure in treating these cases. As he explained, the pre-paralytic case can be transfused with blood from the parents or from several donors where the blood is pooled, or the whole blood can be administered intramuscularly. Furthermore, I feel that the use of whole blood given intramuscularly, probably in 30 c. c. doses in

each buttock, offers considerable encouragement as a prophylactic against this disease in those that have been in direct contact with it.

**J. H. Pritchett, Louisville:** Mr. President and Gentlemen, Dr. Hendon has removed my preamble and I have a hard time getting started. However, this paper is an excellent paper, it represents all we think we know regarding poliomyelitis. I think probably I can best illustrate what I mean, or what I think, by a simple diagram as outlined by Draper in the October Journal of the A. M. A. 1931.

If we let this first thick line represent the course of the disease and make a hump just here which we call A, representing the systemic symptoms such as vomiting, sometimes hyperesthesia, sometimes drowsiness, in other words there are no outstanding features that might indicate poliomyelitis, this may last twenty-four or forty-eight hours; then we have here, probably, a latent period which is also irregular as to duration, maybe a few hours, maybe one or two days or more. Just here we'll draw a line, B, another line, C. So far, if we do a spinal puncture on this child in our effort to make a diagnosis, that fluid is negative, usually. Likewise at B, at the beginning of the latent period, it would probably be negative. However, just here, at what we will call another hump, or what is called the transition period, or the time at which the virus is supposed to penetrate the choroid plexus (and it does in a great many cases), we probably will get at C, or at least at D, a definite diagnostic point spinal fluid under pressure, somewhat cloudy, or ground-glass in appearance, and our increased cell count.

A great many cases that do not go this far are the so-called abortive cases. The diagnosis of poliomyelitis without an epidemic in the preparalytic stage can be made, but it is extremely difficult, very difficult indeed.

At the point D we get a definite increase in the spinal fluid and our positive findings.

Likewise, if we draw another line at E and F, according to Draper's suggestion, we begin to get, just here at C, the spinal sign. I saw a case recently, the boy could not bend his neck; when we asked him to kiss his knee or bend his head forward, he couldn't do so. That is a very positive spinal sign. At the point E, after penetration of the choroid plexus by the virus, we begin to find our symptoms, probably muscle tremor, or probably a weak muscle paralysis, or probably a very definite paralysis of one or both extremities, and last of all, which does occur sometimes, we probably get an ascending paralysis which attacks the diaphragm, and death very shortly ensues. I have seen two or three recent cases.

As to treatment, first absolute rest for a period of a week or ten days, or longer; second, with the paralysis present, absolute rest for the muscle and the calling in of orthopedic men to help us out. A sandbag or probably a cast would be very helpful. Third, we have been urged to repeat a spinal puncture. Fourth, use, in case of epidemic, our convalescent serum. I gave one last week. The child did not develop paralysis, but I thought he might. Dr. South sent me the serum and I used it, and I think probably—I can't prove it—that child might have developed muscle paralysis or something worse. Certainly all we have to offer just now outside of rest and orthopedic help is our serum.

We have been urged to use urotropine in the hope that the liberation of formalin in the spinal canal might in some way, (I don't see how), anagonize the virus. Certainly in one sense, if we have a blocking off of the anterior horn cell or a necrosis of the cell, all the drugs in the world can do but little good.

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## SATURATION IRRADIATION BY DEEP X-RAY TREATMENT FOR CANCER OF THE BREAST

W. J. Young, M. D.

Louisville.

In a previous article on Post Operative Irradiation of Mammary Cancer (April, 1933) in the JOURNAL, the writer advanced the point of advocating the employment of x-ray treatment as a routine measure (x-ray irradiation) following surgical operation for cancer of the breast. The different x-ray techniques for treatment of cancer of the breast have been employed with varying success. The saturation method seems logical and more constant and until a better one is evolved, I submit it to your consideration with a few observations, pertinent to the situation, relative to cancer of the breast.

That a better percentage of cures of patients with cancer of the breast are not obtained are due chiefly to two reasons:

1st. Delay of patients presenting themselves to their physicians for advice.

2nd. Lack of co-operation between the surgeon and radiotherapist, and a closer association with both to the pathologist, with regards to pathology present.

In a review of a group of 6000 cases, the average lapse of time, after discovery of enlargement of breast, before consulting physician, was two years. Thus, it is easy to appreciate that until the public takes better cognizance of the importance which the factor plays in attacking cancer cells and its proliferation, we may expect a low percentage of cure, irrespective of our means of attack on cancer of the breast. Our chances of success toward a cure in primary cancer is as

high as 60 to 70 per cent, whereas, after the metastasis has taken place, the percentage of failures is from 70 to 80 per cent. This is logical, when we consider the cancer cell in its early limited invasion, is relatively easy to destroy in the so-called dividing or budding stage and we are enabled to produce the desired result without permanent injury to adjacent structures. After the primary lesion has become matured, it presents a more difficult proposition and with the extension involving axillary, supra-clavicular invasion, etc., the patient's prospects of cure are poor. The fact that dread plays so large a part in concealment of the lesion is primum, and only through a more thorough knowledge of the importance of early diagnosis to the public by the medical profession, can we hope to overcome this fear. This education is best furnished by the general physician, who in view of our present knowledge is fully aware that any nodule or enlargement of the breast should be thoroughly investigated. The additional fact, conceded by everyone, is that a large percentage of any discernable change or enlargement of the breast becomes malignant, active measures must be taken to arrive at definite diagnosis, and steps taken to correct or attempt to remedy pathology found present.

The co-operation between the surgeon and the radio-therapist is most desirable, and, last but not least, the pathologist should be consulted and, thus, all reach a clear understanding in their respective part toward attaining curative measures. Surgery should take the leading role in cancer of the breast and be first consulted for the following reasons:

Diseases of the breast have belonged to the surgeon for hundreds of years and, he has with therapeutic adjuncts, made definite progress from the beginning. His judgment of therapeutic values should receive consideration and, thus, radium and x-ray became adjuncts to his decision.

If, in the opinion of the surgeon, the lesion can be entirely removed, we have a surgical condition; the pathologist is made the judge of this entirety from an examination of tissue excised and studied. Malignancy diagnosed, the surrounding tissue should be followed by x-ray treatment, even though, assurance is felt by the surgeon and pathologist, the cancerous mass is entirely removed. I stress this, because of the rich glandular structure of the breast, and the impossibility to judge the extent of permeation of cancer growth with a degree of certainty.

I am not enthused with the idea of pre-operative x-ray treatment, in view of the fact, should a temporary improvement in a primary lesion of the breast occur, it may lead to delaying the surgical removal more necessary to achieve a better chance of obtaining a cure. It is a well known fact, after x-ray treatment, there may be partial resolvement of the primary lesion; and, if operative measures are abandoned temporarily, owing to a partial improvement, it lessens ultimately, a chance of permanent cure; especially, if this lesion later extends and becomes radio-resistant.

Everyone knows the greatest chance for results is early surgery. Everyone also knows a radical breast operation is greatly dreaded by the laity. It has been suggested by some physicians that, if glands are not palpable, it might be more beneficial to limit certain operations to simple amputations of the breast. When large involvement of the supra-clavicular and axillary regions are involved, and an ulcerating mass presenting a large tumor in center of breast, the primary tumor may be removed surgically before x-ray treatment be undertaken. In any event, irradiation by x-ray or radium treatment is indicated and, thus, by ridding the patient of an ulcerated tumor, even though, the field is made more possible for effective irradiation, the condition be inoperable as a whole. Irradiation should be given as soon as possible after the operation and completed in as short a time as consistent with the health of the patient. The amount of x-ray given is governed by the amount the skin will stand with safety. The situation of the radio-therapist is not a pleasant one. He is very unfairly judged. To obtain the best results, he has to pursue very close to danger in massive dosage of x-ray with possibly injury or changes in the skin. Should this occur, he is gleefully exposed by the ignorant for his seemingly lack of care and carelessness. If he plays safe and undertreats, it may cost the only chance our patient has. The saturation technique, I am considering in this article which seems the most logical, and is found to produce best clinical results, in my opinion, enables the operator to give a large quantity of x-ray most conducive to a cure. In lots of cases, the radio-therapist needs the assistance of the associated physician to go the limit in a venture to obtain a cure.

It is an accepted fact, cancer cells are stimulated by small doses of x-ray; medium doses inhibit their action and massive doses may cause the destruction of the cancer cells. In massive doses, we are governed in our doses of x-ray and radium to the amount the skin can tolerate without producing skin changes, x-ray burns, etc. Hence, by using

a number of portals of entry directed at an involved area or tumor, we collectively obtain a large percentage of x-ray in the tumor mass without going beyond the danger line to the skin receiving treatment.

The sensitivity of cancer cells is also an established fact. The most susceptible being lymphatic, and most resistant, bone. This sensitivity is also present in cancer cells of the same tissue and our friends, the pathologists are striving to differentiate between malignant cells and those more easily destroyed. Thus far, their success is not satisfactory and the best explanation is that the x-ray treatment is given at time showing sensitivity, must be given at time each patient receives a massive dose of x-ray for what good may result; then classify the degree of malignancy of cell formation in sarcoma and carcinoma for future study and understanding.

A palliative x-ray treatment is to be pursued in hopeless cases with the sole idea of producing an inhibiting action of cancer cells. This is done after it is diagnosed and realized, we are unable to produce a cure and not subject the patient to a lot of unnecessary treatments in the opinion of the radio-therapist. In this manner, we may lessen pain, inhibit or delay progress of the cancer and check the lesions and prevent open sores and draining masses.

The saturation x-ray irradiation treatment is to produce an erythema dose of x-ray and maintain the amount of x-ray until an equal, additional amount of x-ray is given on the area already rayed. It is not feasible to give the erythema dose in one sitting and the accumulation of doses and loss of x-ray may be estimated from the part given each day. This loss is estimated by given factors and known x-ray laws so, that the erythema dose being arrived at, is maintained by the replacement of x-ray lost in the tissues rayed each week, and for a period of three weeks This continuation of x-ray bombardment to point of saturation, gives the patient a better chance of destroying cancer cells. A double amount of irradiation is given in a very short time, and my best results are obtained by this method.

### Conclusions

1. The saturation x-ray treatment requires double the amount of x-ray energy and treatments, but we find our results justify us for the additional effort; and we feel it is a distinct advance over the older x-ray technique.

2. The saturation technique of x-ray permits the patients to receive double the amount of x-ray treatment in a short time, and this irradiation may be given with the same degree of safety within tolerance of the skin as with the older x-ray dosage with the observance of the loss of x-ray treatment by known x-ray laws.

3. That therapeutic results justify using greater amount of time and x-ray in added effort to further effect better percentage of cures in cancer of the breast by x-ray irradiation.

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## SOME PROBLEMS IN TRAUMATIC SURGERY*

Ira N. Kerns, M. D.

Louisville.

Tonight, we are here to deal with a subject which is vital to the interest of every man, woman and child in the trades and laboring fields together with other lines of industry. We are also to consider the accidents which arise outside of the field of industry, and which have grown, from a public standpoint, to such enormous proportions in the last few years that it is most appalling; namely, the subject of traumatic surgery and its problems.

The word traumatic in itself has a very broad application on account of the fact that any accident as a result of external violence is classified under this heading. The field of industrial surgery which is the traumatic surgery of industry, embraces the physical and financial welfare of practically all of those who are employed in the different lines of work and their dependents. So great has this line of work become, namely, caring for those who become incapacitated by accidents, that Federal and State laws have been enacted for the care of those incapacitated by such means and their dependents, even should death have over taken the individual as a result of such accidents. A great many states as well as the Federal Government have gone further and have the problem of rehabilitation before them of the individual who has become disabled through industry.

In the traumatic field which embraces the general public, over which there is no control, such as that exercised by industry: in other words where everyone is his own free agent to use his own judgment as the case may be, when exposed to dangers. Let me say that since the advent of automobiles, airplanes, and other modes of rapid transportation, but particularly the automobile, public accidents are increasing every day in an alarming degree and at the present time there seems to be no way of stamping out this vicious thing which is taking as its toll the lives of our people, and in a great many instances rendering others hopeless cripples.

In industry we have safety engineers, safety committees, safety schools and safety dev

*Read before the Jefferson County Medical

for the prevention of accidents as far as possible, and even after an accident, to examine into the facts and so far as possible to obviate a repetition of these accidents, by the correction of these causative factors, but with the public there is not that control and we are dealing with the human element.

Let me digress far enough to call to mind the fact that the psychological tests of the United States Army during the time of the World War revealed some very interesting data along this line, with which most medical men are familiar, and when we stop to think of the millions of automobiles on our highways which have served their usefulness and are carried along on the highways as a pile of junk, persons operating such machines are a distinct menace to the safety, and we begin to wonder whether, in time to come it might be possible to cut a great portion of this terrific destruction which is far more hazardous than any of the hazardous occupations in which industry is engaged.

In the consideration of the causative factors in industrial accidents, the United States Steel Corporation, several years ago, issued a very interesting statistical report which showed that 68 per cent of all such accidents were due to hand labor, that is to say, where the individual was doing work of a character not connected with machinery; about 20 per cent of the accidents classified at that time were due to machinery; about 8 per cent were eye cases and the balance classified under miscellaneous; so we can see, under those conditions, that the majority of these accidents are classified under what we might term as due to a great degree to unskilled labor. There are some other interesting facts to bear in mind in regard to the time when these accidents happen; when the individual first goes to work in the morning, he is probably not up and alert, immediately after the lunch period we also find a great number of these accidents, and again just before quitting time, when the individual relaxes, and is very probably intent on getting home from his work.

Lacerations, contusions and infections from different causes, together with fractures, very probably contribute the bulk of the work in industrial surgery. The infections, to a great extent, are those to which the employee has paid no attention, and the process has gotten a very good start before it is even seen by someone capable of taking care of it. Needless to say the amount of money which has to be paid out to take care of this individual, very often times is a needless expense, when such conditions might have been averted as only a trivial matter and the individual saved pain and suffering, as well as disability. Fractures of all kinds, with their complications, go to make up a very considerable number of these cases, but are not in bulk comparison. We must not forget the old back cases which are generally lumbago; the hernia question is still a bugbear and really has no place in the compensation act, but, as long as it is there we have to recognize it as such.

The larger institutions today, in order to cut down the loss of accidents have their institutions hospitalized and are insisting that these accidents, no matter how trivial, should be reported at once. As a matter of rivalry among the different departments and their foremen, meetings for safety in the handling of their men in order to preclude a great many of these accidents, realizing that this loss of man power, not alone disables the individual from his own standpoint, and his earning capacity, but necessitates, in a great many cases, the substitution of other employees to carry on this man's kind of work, and he very often does it to the detriment of the particular operation which this man was doing before his injury. If the new employee gets over a certain period without sustaining an accident, he bids fair to go for a reasonable time without any trouble, and may not have any trouble at all. There has been one condition that has been noted since there has been so much unemployment, namely, when these old experienced men have been called back to work, the percentage of accidents has been higher on account of the fact that there is over confidence in the handling of an operation they have not performed for a very considerable period of time; there is another interesting fact that I have observed; especially is it true in the hand labor field, namely, the fact that these individuals who have been out of employment have been underfed and have done no work for a considerable period of time, are soft and have not been able to carry on certain classes of hard work without a certain percentage of accidents as a result of these conditions. This situation will of course, right itself as time goes on, and more will have steady employment. There is no doubt that factory hospital concentration, where practical, gives the best results in early cases and cuts down this loss. There is always a certain percentage of cases which have a certain amount of permanent partial disability left as a result of accident, or perhaps a permanent total disability to the individual. These conditions, of course, vary in proportion to the severity of the injury received, together with the conditions encountered in the matter of complication, and along with this condition just mentioned, the question of rehabilitation to restore these people to some gainful occupation, if possible, has already been mentioned.

There has been set up by the Federal Gov-

ernment, as well as practically all of the States of the Union, compensation laws for the payment of individuals who have sustained these accidents. In comparison to the laws of the several States, the State of Kentucky has one of the fairest compensation acts, in rating of permanent disability of any character, of any State in the Union. On account of the fact that pre-existing disease is taken into consideration, the Federal Law is patterned after these same lines, while in other states the individual is taken as he is found. This condition of affairs is undoubtedly creating a hardship for the individual worker, on account of the fact that a very thorough physical examination is necessary for the individual to obtain work, and which leaves a great many people in a bad position for work and puts them in a sub-standard class; in many instances they have to take whatever work they can get without examination. As a matter of comment, this statement might seem a little far fetched in the mind of the writer, but it would seem to me that there should be some way of classifying these individuals under the act for work as regards their compensation pay, if and when they have sustained an accident, and give them a chance to obtain a living. There is also a class, unfortunately, that exaggerate conditions for financial gain and give the surgeon no end of trouble on account of the fact that subjective symptoms are not in line with findings and they write their own curative prescription on the dotted line, as per settlement check. The Doctor should be fair and impartial. Remember your duty is to your patient, and justice from a legal standpoint to all parties. In introspective and exaggerated disabilities for financial reasons, we should not allow ourselves to be misled when it comes to justice.

The age limit in some instances is playing a very prominent part, and a great many institutions are not accepting men over 45 years of age, which condition also plays a hardship on a great many men that have reached that limit, and have to apply for a new position on account of having left the service of the company, or for other reasons. This situation does not apply in the larger plants where men that have put in years of service, and the writer can safely say that the institutions of Louisville, as far as his experience goes, are very lenient on this question, and should be in so far as it is practical, even to the point, if possible, of putting older men who have given of their labors and have become old in service, into other positions, even with lesser wage, in order to allow them to earn a livelihood. There is considerably more that could be written upon this question, but it is very lengthy and we will have to pass on.

As to the question of public accidents, with all of its horrors. In spite of the laws enacted to curb this vicious evil these accidents are on the increase and the problem remains with us, how are we going to curb them. It has been rightly said from the standpoint of the automobile, "The science of good driving is not to keep from hitting the other fellow, but to keep him from hitting you." The next problem from the surgeons standpoint is how are we, as surgeons, going to take care of them. Many of these patients come before us as the very worst surgical risks and it taxes all of one's ability as well as ingenuity to be able to cope with these conditions, involving knowledge of almost every line of surgery to which the human individual must be subjected in order to reach a successful termination of the case in hand.

## DISCUSSION

**Heman Humphrey:** One question that we must consider in a discussion of this subject is—"What is a traumatic injury?" Within the past few years I have seen a great many very peculiar so-called "traumatic injuries." For example, a man gets a cut on his finger. Six months later he develops paralysis agitans and several doctors testify that the paralysis agitans is a direct result of the cut on the finegr.

One of the most pernicious things we have to deal with is the employment, by many large industrial concerns, of a so-called safety man, who, in my experience, generally does more harm than good. Likewise, the competitive drills conducted by these concerns, which result in many injuries not being reported or minimized. In many instances injuries which should be seen by the doctor are not reported because of the desire of one department to make a better showing in this respect than another. The number of injuries is not lessened by not reporting them and this sort of thing does not get us anywhere.

As the essayist has intimated, the physician who would make a specialty of traumatic surgery, must study and be proficient in every department of medicine and surgery, from skin diseases to obstetrics. He sees and hears of a great many peculiar things. For example, a woman was injured in an automobile accident. Five months later she was delivered of a baby with abruptio placenta. In the meantime, there had been no symptoms of any kind. Yet it was claimed that the accident was the cause of the oblata placenta occurring five months later.

One good thing is that the practice of traumatic surgery will keep the physician on his toes, so to speak. Many bad results in private practice are never brought to light, but it is very hard to hide a bad result in a compensation case, because it is to the patient's pecuniary

interest to make the most of any bad results, and oftentimes he has a lawyer to help him. This does a great deal of good because it makes us work harder to get good results.

**C. G. Forsee:** I do not agree with Dr. Humphrey as to the value of the safety engineer. Within the past two months, the L. & N. R. R. Company which is divided into eighteen safety divisions, put on a campaign for a 100 per cent month, which was not quite successful in that there were two reportable injuries during the month. One man suffered a broken toe as a result of a milk can being thrown on his foot, and another man was injured while putting castings together.

I have closely observed the results of these safety campaigns for a number of years, and there is no doubt that they have brought about a material reduction in the number of injuries sustained, particularly in the larger industries where the men are subject to control. In the smaller concerns this is obviously more difficult. In the first place, the men who do the employing do not, as a rule, require the same standards as the larger concerns. In the case of the L. & N. R. R. I am sure that the persistent preaching of safety-first propaganda has materially lessened the number of injuries, particularly during the past five or six years during which a more or less intensive campaign has been waged.

Still another result which has convinced me of the value of safety propaganda, is the fact that very rarely do we hear of a child getting hurt on the way to or from school. These children are taught at school to watch out for automobiles, to observe traffic lights, etc., and with these principles fresh in their minds they seldom get hurt on the way to or from school. A psychological problem in this connection, however, is that the same children, playing on the streets after school hours, sometimes forget or disregard these principles and are struck by automobiles. Adults often do the same thing. Those of us who drive automobiles have often seen pedestrians, particularly elderly persons, step out into the street, with a defiant attitude, directly in the path of an automobile, with apparently no thought of the possibility of some mechanical defect, or faulty brakes, preventing the driver from stopping. It seems almost impossible to educate pedestrians as to the necessity for care in crossing streets and highways. I believe persistent safety propaganda is a good thing and tends to reduce the number of accidents.

**J. Garland Sherrill:** Some years ago I read a paper on the subject of "Accidents in Industry" and pointed out that the large industries of this country take the most painstaking care of their machinery. They buy the best and most improved machinery to begin with and then set aside a maintenance fund for the purpose of keeping that machinery at the highest possible degree of efficiency. And yet these same industries have never considered it wise or necessary to apply the same principles to their human machinery; first, to employ a high standard of labor, and then to make some provision by which these men and women may be taken care of in their declining years after their efficiency is gone. Many of them give the best years of their lives to the building up of a great industry, and then when they are no longer efficient, are thrown out with no provision for the evening of life. The same applies to doctors employed by insurance companies. It is not right. Industry should take care of its labor in at least the same degree that it takes care of its machinery. The working period of the average man's life is something like thirty years and during this period he should be aided in providing means to take care of him in his old age. If the new N. R. A. plan works as it is intended to work, giving every man a living wage and assistance in making provision for his old age, I believe the rising generation will fare considerably better in this respect than we have.

Like Dr. Forsee, I believe safety propaganda has served to reduce the number of injuries occurring in industry. Those concerns which provide first-aid stations, competent medical and nursing staffs and hospital facilities certainly fare better than those which do not provide such facilities, and leave their injured to be taken care of as best they can.

**Ira Kerns,** (In closing): I agree with both Dr. Humphrey and Dr. Forsee, although they seemingly hold opposite views concerning the value of the safety engineer and safety propaganda.

Dr. Humphrey's statement that safety propaganda, competitive campaigns, etc., tend to make the men minimize injuries that should be reported, is borne out by an experience I had some time ago in a large industrial plant in Louisville. At a meeting with 300 foremen of this plant, it developed that in their eagerness to keep down the number of injuries reported, the foremen were carrying first-aid materials in their pockets and taking care of apparently minor injuries themselves. I promptly put my foot down on this practice and with the aid of the vice president of the concern the foremen were instructed to take no chances, but to send all cases to the hospital unit for treatment. Probably Dr. Humphrey has had a similar experience.

On the other hand, Dr. Forsee is also right in saying that where proper co-operation is secured, safety engineers and safety propaganda have been very effective in reducing the number of industrial accidents.

I also agree with Dr. Sherrill's remarks concerning the practice of large industries in employing men, including doctors, during the efficiency period of their lives, usually something like thirty years, and then throwing them aside to make way for younger men with no provision

made for their declining years. That is human nature and I do not know how it is to be corrected, except by classification.

## CANCER OF THE SKIN*

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Louisville.

Cancer of the skin represents a very definite challenge to the dermatologist and to the family physician. It is visible to the naked eye and it is grossly palpable from a very early stage, often from a precancerous stage. Furthermore, in the great majority of cases it is situated on an exposed surface, on the face or hands. It is as conspicuous as a bill board in a pleasant rural landscape—and it is apparently as easy to ignore as the "Slow down—School Ahead" sign on that same country road. It must be supposed that it is a case of familiarity breeding contempt, since the skin of the face and hands of a large number, probably the majority, of persons who have reached the cancer age show blemishes, and, likewise, large numbers of persons carry through life such skin lesions as are commonly termed "precancerous" or lesions that are not by the uninitiated distinguishable from these, and yet never develop cancer. In regard to all cancers, the diagnostician and more especially the family physician finds himself in the uncomfortable position of having to choose between the risk of frequently crying "Wolf! wolf!" when there is no wolf and the graver danger of waiting until the horse is stolen before he locks the stable door. With cancer of the internal organs, the procedures necessary to decide the question as to the presence or absence of cancer are often trying to the patient, time-consuming and expensive and, if exploratory operation is necessary, dangerous as well. With cancer of the skin, none of these obstacles to a prompt diagnosis exist. If biopsy is desirable, it can be done with a minimum of risk. Advanced cases of cancer of the skin ought never to be seen.

The course of primary skin cancers is as a rule extremely chronic. They increase in size very slowly. Years may pass before the regional lymph glands are involved, and, indeed, in the case of the basal cell cancer, by far the most frequent variety, metastasis to the lymph glands is practically never seen. Thus we are offered every opportunity for eradicating the disease before it has done irreparable harm. The prognosis for cancer of the skin treated adequately and early is good. It is naturally not so good if the condition has been allowed to advance, but even in that event it is decided better than for cancer of the internal organs or of the mucous membranes. Surprisingly successful results both as to eradication of the disease and as to restoration of normal appearance are frequently being reported in cases of rodent ulcers that have already destroyed large areas of skin.

Cancer may take its origin in apparently normal skin, but it frequently arises in pathologically changed skin. Senile changes in the skin, the same as senile changes in other organs, appear to predispose to cancer, and this includes the premature senile changes seen in the exposed skin of sailors and farmers. Habitual and prolonged exposure to irradiation, whether by the sun's rays or by roentgen or radium rays, seems to be capable of producing this premature old age of the skin which forms a suitable soil for cancer to develop in. Chronic inflammations and infections, in the skin as in other parts of the body, are liable to be the starting points of cancer. Such are leg ulcer, chronic eczema, psoriasis, lichen ruber, lupus, syphilis and the cicatrices arising from the two last named diseases and from burns. There is another group of skin diseases, localized in the epidermis, which are commonly called precancerous. Paget's disease of the nipple and Bowen's disease, which shows at the beginning patches of firm, red crusted papules, sometimes with papillomatous surface beneath the crust, are recognized as definitely precancerous, if not from the start malignant conditions. Certain lesions of the epidermis, in themselves harmless, classed in ordinary language as warts and moles, are also to be considered precancerous, but in a more limited and conditional sense. It is also necessary to distinguish between them more carefully than is perhaps commonly done. Senile warts and senile keratomas, for instance, are basically different in their nature.

Montgomery and Dorffel made a study, clinical and histologic, of one hundred senile warts and 40 senile keratomas seen at the Mayo Clinic. They assert that in their experience a senile wart never undergoes malignant degeneration unless it is subjected to continued irritation, but that senile keratomas are undoubtedly precancerous and do develop into cancer in a considerable percentage of cases. Senile warts, sometimes called seborrheic warts, are found mainly on the seborrheic regions of the trunk, in the sweat channels. Senile keratomas are found especially on the face and on the back of the hands. Senile warts appear first as small yellow spots. They enlarge and become darkly pigmented. They are covered with fatty squames which are easily scraped off. Small, horny plugs may be present, giving

*Read before the Perry County Medical Society, October 9, 1933.

the lesion a speckled appearance. This nevoid type is the more common, but there is also a type of more warty appearance, in which hyperkeratosis is more conspicuous than pigmentation. This latter variety is more difficult to distinguish from senile keratoma.

While senile warts usually appear multiple, senile keratomas may be single or multiple. They may be flat or elevated, are brownish or grayish in color, and the scales, instead of being easily detachable as in senile warts, adhere firmly. Such a lesion may remain quiescent for years and then suddenly begin to grow, strike into the deeper tissues, and metastasize. In the precancerous stage it is curable by radiotherapy in one hundred per cent of cases.

Farrell has made a study of 265 patients with melanoma seen at the Mayo Clinic. Sixty per cent took origin from nevi. The dangerous type of mole is steel-blue or blue-black, slightly elevated, with a thin, smooth covering of epidermis. Trauma is a factor in exciting such moles to malignancy. Hence, any attempt at treatment, short of radical removal is dangerous. Early, radical removal of any type of nevus so located as to be subjected to insult (such as the rubbing of the collar against a mole on the neck) is urged as the only means of reducing the high mortality from melanoma. This tumor is extremely malignant. Among skin tumors it stands in a class by itself and is not included in the comparatively favorable prognosis of what are usually termed skin cancers.

Skin cancers are classified in various ways: according to their cellular type, as basal and squamous cell; according to the epidermal layer where they take origin, as basal cell, again, and prickle cell or spinocellular; according to their clinical appearance and manner of growth, as superficial, infiltrating, and proliferating or papillary. The histologic distinctions cannot be rightly drawn, because it is not unusual for a single tumor to contain the characteristic structures of both basal cell and squamous cell cancer. Transitional cell tumors also occur. Nevertheless, the histologic distinction has clinical importance. The basal cell cancer is more benign in every way; it grows more slowly, it spreads on the surface instead of striking down, it becomes infected less easily, it practically never metastasizes even to the regional glands, it is more readily eradicated by any of the methods of treatment used but is especially sensitive to irradiation. The squamous cell cancer grows more rapidly, though it may still be a slow growing tumor, it infiltrates early, it succumbs to infection more readily, it metastasizes, though not early and hence in only a small percentage of cases treated within a reasonable length of time, it recurs after treatment more often than basal cell cancer and it is definitely less responsive to irradiation, although still a radiosensitive type of tumor. The greater number of cancers of the skin are basal cell; cancers of the mucous membranes are mostly squamous cell.

More skin cancers appear on the face than on all other parts of the body put together. Magnusson, who has recently reported on a series of 783 skin cancers, attempts a topographic differentiation of basal cell cancer and squamous cell cancer on the face. He found basal cell cancer to be most frequent in an area bounded above by a line drawn between the extreme lateral points of the orbital ridges, below by a line drawn through the lower edges of the wings of the nose, and laterally by an outward curving line running between the lateral orbital edge and the wing of the nose. In addition, he found it not uncommon on the forehead and the temporal region in women. Squamous cell cancer appeared most frequently on the ears, in the temporal regions and over the ridge of the nose.

Magnusson gives, further, a clear description of the two types of cancer in their early stages. It is important to differentiate between them because in radiologic treatment the squamous cell cancer should receive larger doses and more penetrating radiations and in surgical treatment excision must be wider and deeper in view of its infiltrating tendencies. The basal cell cancer in its earliest stage is described as a superficial nodule of waxy, semitranslucent appearance. It is an ulcerating tumor and there is as a rule a well defined, firm edge, like an embankment, around the ulceration, which is usually covered with a crust. On the temples and over the ridge of the nose the ulcerations may heal at the center, and the tumor then has the appearance of an atrophic skin area surrounded by thin, winding parapets, with small, crusted ulcerations here and there. In places where there is a greater growth of hair they are often like a clear, granulating field without raised edges and entirely ulcerated. At sites of surface irregularly, as in the angle of the nasal wing or beneath the lobe of the ear, the cancer may appear as an ulcerating fissure, surrounded by a firm and sometimes undermined edge. Slow growth and well defined outline are characteristic of basal cell cancers of the skin. Only after a long time do the underlying tissues become infiltrated. In rapidly developing cases, "daughter tumors" sometimes appear in the immediate vicinity and may be joined to the mother tumor by a thin subcutaneous strand. In some six hundred cases of basal cell tumor studied by Magnusson there was no case of

metastasis. Squamous cell cancer of the skin in its earliest stage looks like a small area of horny skin, or a keratosing papilloma resting on a disc-like induration. Tumors developing in the scars of lupus, burns, furunculosis, osteomyelitis, etc., are more likely to be of the squamous cell variety.

Magnusson found that the size and manner of growth of the tumor had more effect on the prognosis than did the histologic type. In his statistics the figures for cure of superficial tumors were much better than those for infiltrating tumors and the prognosis became noticeably less favorable when a tumor was larger than four square centimeters. Riehl also emphasizes the importance of the clinical classification. He describes the superficial, the infiltrating and the proliferating papillary forms. At its earliest appearance the superficial epithelioma bears so innocent a look and is indeed so inconspicuous that it is readily overlooked. We see a flat nodule or a whitish discoloration not raised above the skin level, resembling milium. For many weeks this may remain no larger than one to two centimeters in diameter. Gradually it widens out, the center sinks in and a border of hard, white nodules or a rim of infiltrate forms. The center becomes eroded, crusts over and may become covered again with epithelium. In time it again breaks down and the margin pushes out further and further into healthy skin. Thus the well known picture of rodent ulcer develops. For a while it still remains a localized disease, but if neglected the ulcerations strike down and the entire cutis and the underlying structures, cartilage, bone, etc., are included in the destruction. Such a tumor may be very extensive and the disfigurement shocking, its course may have run over ten to fifteen years, and still the general health may be unaltered, but in the end cachexia appears, if treatment is still neglected.

The infiltrating form, that is, the form in which infiltration is an early characteristic, begins as a nodular, hard, painless tumor, and is usually the size of a hemp-seed or a pea when it is discovered. It is then freely movable and sharply delimited. The overlying skin is of normal appearance. The nodule enlarges slowly and approaches the surface. It breaks down and shows a deep, crater-like ulcer. Thereafter the infiltration and deep involvement follow the course described above, but the entire progress is more rapid. There is an infiltrating form seen on the lip which begins as a flat nodule in the cutis, which extends peripherally and from its hardness suggests an initial sclerosis. In this form the glands become involved early.

The proliferating papillary cancer develops on the site of lupus vulgaris or other pathologically altered skin. There is massive proliferation of cancer tissue and rapid breaking down. Riehl finds that this form has the least favorable prognosis.

Operation, x-rays, radium, and surgical diathermy all give excellent results in suitable cases. There cannot be said to be any best method for unselected cases. The mode of treatment must be chosen with regard to the peculiarities of the individual case. But in general, it can be stated that radiotherapy, x-rays or radium, have in the last few years superseded surgery in treatment of cancer of the skin and that there is, indeed, no field in which radiotherapy gives such splendid results as in that of cutaneous cancer. If the new growths are treated early—and with such easily seen and readily approachable lesions there can be no good excuse for their not being treated early—one hundred per cent of successes ought to be obtained. If they are allowed to progress, the chances of success with squamous cell tumors become less than for those of basal cell type. The basal cell tumor longer retains its superficial character.

A point that is highly important for the prognosis is the relation to cartilage and bone. If cartilage or bone is already invaded, the hope of cure is definitely diminished. For a tumor situated close to cartilage or bone, a delicate radiotherapeutic technic is required, and it may be dangerous, because of the liability of these structures to radionecrosis, to give as heavy dosage or use as penetrating rays as would otherwise be desirable. Cancer on the ear, eyelid, nose and scalp fall in this category. Any delay in treating cancer of the skin overlying cartilage where the intervening tissue layer is thin may prove disastrous.

An advantage of radiotherapy over surgery lies in the vastly superior cosmetic effects. The scar from radiotherapy is soft and pliable and in the case of a small superficial growth should be practically invisible. The necessity of excising widely when surgery is used means that skin grafting must be employed or considerable disfigurement must, in many cases, be accepted. The choice between x-rays and radium must be made for the individual case. Radium possesses certain advantages for a field of such varying contours and such small individual planes as the face, in that it allows concentration of the radiations in a small area. It offers, in addition, a wide variety of technics, so that treatment may be adapted to the peculiarities of the site and to the extent of the tumor, peripherally or downward, with great nicety. Cross firing can be employed with effectiveness and radium needles or radon seeds can be implanted with ease and accuracy.

Surgical diathermy can be very useful in

connection with radiotherapy, by smoothing off external tumor masses to allow of more even irradiation and a smaller dose of rays.

## MENINGO-VASCULAR SYPHILIS*

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The wide spread prevalence of lues in rural and urban life invading all strata of society is too well known to the members of the medical profession for me to enter into a discussion of the incidence of this disease. We are all familiar with its rapid increase among our people and the enormity of the problem which the general practitioner, as well as the specialist has to face in the treatment of this disease and its sequela. Neither will it be necessary for me to review the characteristic clinical course of this disease with its three classical divisions, primary, econdary and tertiary. This is common knowledge among all men of the profession today.

The purpose of this discussion is to direct the attention of the general practitioner to one of the frequently overlooked early complications of lues, which have been referred to by a variety of names by the syphilogists, early neuro-syphilis, recurrent early syphilis and meningo-vascular syphilis. The latter name I believe to be preferable because it is descriptive of the type of involvement.

In order to present this problem more clearly, I shall present a brief synopsis of three cases, which illustrate the complication referred to in this paper.

### Case No. I

A taxi-driver, white male, age thirty, with no previous history of ill health, began to complain of dizziness associated with some nausea. He consulted his family physician, who, after a superficial history and examination, told the patient he probably had indigestion and prescribed one of the effervescent saline catharties and instructed him as regards his diet for the next few days. The patient carried out the instructions of the doctor but, his symptoms did not improve. The patient then consulted an E. E. N. T. specialist, who after examination of his eyes and vestibular apparatus, informed him that he had a mild degree of stygmatism and needed glasses to correct this defect. The propect of glasses did not suit the patient and being somewhat uneasy about his past history he presented himself to a genito-urinary specialist, who obtained a positive history of luetic infection some year and a half past. A Wassermann test was taken which showed 4 plus, Wassermann and Kahn. Active antiluetic treatment was started and the symptoms began to clear up after the first neo-arsphenamin injection and were completely gone by the third injection. The patient volunteered the information that his head seemed clearer and he could drive better and was more alert in catching fares for his taxi-business.

### Case No. II

White male, farmer, age forty, with chief complaint of burning of skin of the face and neck. This patient gave a positive history of G. C. several years ago but denied history of luetic infection. After some persuasion the patient was convinced that he should submit to a "blood-test." The report obtained was a negative Wassermann and three plus Kahn. The patient at first refused treatment, stating that he thought I might give him something to take for his blood or to rub on the skin for the burning, however, after a thorough explanation he agreed to submit to treatment. After the fourth injection of neo-arsphenamin the patient stated that the burning of the skin on his face and neck had completely disappeared; that he could sleep better and was much improved as to his nervousness. A Wassermann taken after the first injection of neo-arsphenamin was reported as four plus Wassermann and Kahn.

### Case No. III

This patient, a white male, age twenty-four, with good family background and a reputation for sober, industrious life for a young man, consulted his family physician because of a persistent headache. The usual cathartic and prescription for aspirin, phenacetin and caffeine was prescribed but the patient did not improve. Some two months after the onset of the headaches I was called to see the wife of the patient. At that time I noticed the patient referred to, holding his head in his hands and he would frequently burst out laughing without any apparent cause. I inquired the cause of this strange behavior on the part of her husband. The wife stated it was because of his head, which caused him so much pain that he would sometimes talk "off."

I heard no more of this family until some two weeks later, the patient was brought unconscious to the hospital. At the request of the family I took charge of the case and obtained the information that the patient had been very sick for about one week with stomach "trouble" and was being treated for that. He had been unable to eat, vomited and complained of stiffness of the neck with intense headaches. The morning before admission to the hospital the patient had talked irrational and became violent, leaping from

*Read before the Third District Medical Society, Hopkinsville.

the bed and rushed out into the yard, several persons were needed to overpower him, he later relapsed into muttering stupor in which condition he was brought to the hospital. When first examined the patient was confined in a straight-jacket and appeared to be in a comatose condition.

Physical examination was essentially negative except for the coma, reflexes present active heart sounds, regular temperature normal, pulse normal. Ophthalmoscopic examination revealed marked choked discs bilateral. Patient was incontinent, both urine and faeces, Babinski present, W. B. C. 10,950, lymphocytes 90 per cent. Neutrophilis 10 per cent. R. B. C. 5,000,000. Spinal puncture was done, which revealed fluid under pressure 35 mm hg. The fluid was clear with increased cell count 190, globulin two plus, collodial gold test, negative. Specimen of spinal fluid and blood taken for Wassermann.

The patient was fed by means of nasal tube, giving sodium bromide and chloral hydrate by rectum for restlessness, sodium iodide given intravenously and daily mercury rubs. On the third day no improvement was noted except the patient seemed to be in a deeper coma. On this day spinal puncture done and as usual fluid allowed to escape until pressure had been lowered to 10 mm hg. and patient was given neo-arsphenamin .45 intravenously. I might add that I was criticised by some of my associates on the staff for using the arsenicals in this case. After the first injection of neo-arsphenamin the patient began to improve, he became conscious after the second, given at a four day interval, and fully rational after the third. The patient was discharged after the fourth neo-arsphenamin injection and his anti-luetic treatment continued at the office. At the present time the patient has made a complete recovery and is actively engaged in making a crop.

There is an apparent wide range between the clinical picture of the three cases briefly reviewed, however, they all fall under the classification of meningo-vascular lueties. These unfortunates are on the increase and the clinician must be ever on the alert to discover such cases as their only hope of complete recovery rests upon early diagnosis and prompt and efficient treatment. As in the case of the cardio-vascular system infection of the nervous system is generally accepted as presumptive in the majority of cases of early syphilis.

The mechanism involved, which produce the clinicial picture in these types of cases, may be briefly reviewed as follows:

The approach of the spirochaeta pallida to the nervous system must be by the way of the vascular system. The organisms conveyed to the nervous system by the blood stream are first deposited in the meninges from which most of the nervous system obtains its blood supply. Hence, early neuro-syphilis is overwhelming meningeal or meningo-vascular in its signs and symptoms. The richest blood supply of the brain is at its base, therefore basilar meningitis is the fundamental first sign of invasion of the nervous system by the spirochaete pallida, and cranial nerve palsies, optic nerve involvement, headache, increased cell count and increased pressure of the spinal fluid may be and are, in fact, the first signs and symptoms. Later the distribution of the organisms may be explained by Kafka's hydromechanical theory, i. e., the rhythmic pulsations of the cerebro-spinal fluid containing sac under the action of the arterial pulse, tends, as sand is shaken in a sifter, to distribute solid particles to the most dependent portions, namely, the horizontally lying meningeal floor of the brain base and the most dependent portions of the cord, the roots of the lumbosacral sensory nerves, the spinal root ganglia, etc.

The microscope reveals that the vascular lesions are similar to those seen in other parts of the body. They consist primarily of a swelling of the endothelium of the vessels with the production in the adventitia, the media and the intimal layers of the vessels of new tissue composed of spindle cells and loose interstitial connective tissue. In this interstitial tissue there are frequently found large numbers of lymphocytes. In other words we have in the early period of this disease an endarteritis, an inflammatory process involving the blood supply to the brain and the symptoms resultant therefrom are due to interference with the blood supply to the nervous system or secondary to pressure produced by the edema of the inflammatory process. At this stage there has been little or no destruction of the parenchyma of the nerve tissue. However, as the process continues the newly formed tissue gradually alters into a dense sclerotic fibrous tissue, which ultimately destroys the muscular and elastic lamina of the vessels. The lumen of all the vessels are reduced in every case and may be totally obliterated in some. The changes in the vessels result in degenerative processes within the nerve tissue itself due to lack of nutrition to the brain substance.

From the brief resume of the pathological processes involved in early neuro-syphilis you can readily understand the variety of symptoms and the almost miraculous response to early treatment. The most important fact is that the anti-leutic treatment should be instituted early because, as we have shown, the process is limited to inflammatory changes in the blood vessels and meninges, these are

in turn the most susceptible to employment of the antispirochetic substances. This is the time for the arsenicals. All of you have seen the Hunterian chancre with the typical signs of inflammation about it, and watched this inflammatory process with its edema and discharge melt away as by magic after a single dose of neo-arsphenamin. If you can visualize such an inflammatory process, different only in degree, involving the covering of the brain substance you will realize why I specify the arsenicals as the drug par excellence in the treatment of meningo-vascular syphilis.

A comprehensive discussion of the symptoms and signs of meningo-vascular syphilis would require more time than I feel justified in taking with this paper. As we all know syphilis is the great imitator in that it may simulate almost any of the diseases known to the internist. Lues is a veritable mocking bird among diseases carrying the refrains similar to T. B. neoplasm, bone disease and nephritis with a few individual tunes of its own. What can be said of the wide range of symptoms and signs of lues in a general way is applicable to the nervous system. It may run the gamut of nervous and mental diseases from neurasthenia and anxiety neuroses to paraplegia with complete paralysis of the lower extremities. However, there are a few outstanding symptoms, which because of their common occurrence in meningo-vascular syphilis I believe it of value to discuss them briefly.

The first of these is headache, usually worse at night, or early morning, this is due to a diffused basilar meningitis with increased intracranial pressure, in quick succession follow complaints of stiff neck, vertigo, nausea and vomiting. The clinical signs of this period are almost entirely confined to the eye and can only be noted by ophthalmoscopic examination, which reveals optic neuritis or choked discs from chiasm involvement or the increased intracranial pressure. Next we may get the focal signs due to involvement of the cranial nerves; VIII nerve, auditory cochlear division resulting in tinnitus unilateral or bilateral and impairment of hearing for the high tones, VIII nerve, vestibular division with vertigo, nausea, vomiting, nystagmus, falling to one side and past pointing, VII nerve inability to whistle or close one eye, corner of mouth drops, or mouth pulls to unaffected side, II nerve, complaint of failing vision, scotoma, III, IV and VI nerves diplopia, V nerve anesthesia or paresthesia over areas supplied, cheek biting, etc. As previously mentioned the spinal nerves may be involved as well as the cranial, the roots of the lumbosacral nerves, the spinal root ganglia resulting in areas of anesthesia, paresthesia over areas supplied by these nerves. There are also the signs and symptoms as illustrated in case No. III, mental confusion, deliruim, maniacal coma with incontinence, amnesia or epileptiform convulsions.

Any patient with symptoms or clinical signs which do not fit into the clinical picture of the more common diseases it is a good plan to suspect lues. A good many neurasthenics will reveal evidence of lues. All patients in which a definite diagnosis cannot be established should be suspected of syphilis and a blood Wassermann and spinal fluid Wassermann taken. The Ophthalmologist should be ever on the alert to make an early diagnosis on meningo-vascular syphilis.

Diagnosis: Of prime importance in these cases, as in the case of all bodily ills and injuries, is the history. However, I may add the history of previous infection is only valuable when it is positive. The denial on the part of any patient of a luetic infection is not to be taken seriously. The personal history is quite important as to martial state changes of residence and type of occupation. Physical examination should be done to pick up evidence of syphilis in other parts of the body, particular pains should be given to the neurological examination, which is not at all difficult after a little practice and accustoming oneself to a definite routine in the method of conducting this type of an examination. The eye grounds should be examined by means of the ophthalmoscope, this can be done in a darkened room. Wassermann and Kahn should be done on all of these patients. We place more confidence in the Kahn, as a more sensitive test. As in the case of the history, the only valuable evidence is when the Wassermann or Kahn are positive and in all cases of the so-called faintly positive one and two plus a provocative of .45 gm neo-arsphenamin should be given and the blood test repeated. A spinal puncture should be done and a spinal fluid Wassermann in all cases where we have a negative Wassermann with suggestive symptoms. The spinal fluid cell count is very important as well as the globulin test. The collodial gold test is practically always negative. The typical paretic curve being found in late neuro-syphilis after the parenchyma has become involved, in this respect it is a valuable differential sign between meningo-vascular lues and general paresis or late neuro-syphilis.

Treatment: In cases of meningo-vascular syphilis we have had the most satisfactory responses to active treatment in all of our therapeutic experience. The treatment of meningovascular differs very little from the treatment of syphilis in general. We may discuss briefly our therapeutic agents, listing

them in order of their effectiveness as follows:

Arsenicals arsphenamin the original discovery of Erlich, which remains today our most powerful spirocheticide, neo-arsphenamin, the most popular and most universally used arsenical because of the simpleness of its administration. Sulpharsphenamin and tryparsimid, the latter only valuable in late neuro-syphilis. Mercurials, one of the earliest of the therapeutic agents, so early in fact, that we find it contemporary with the application of the name syphilis, being referred to in the poem, which introduces the shepherd Syphilis, who is described as having the diseases, by the medieval poet. One of the verses of this poem describes a lake in whose silvery sheen all the poisons of the disease may be washed awey. Mercury inunctions are the most effective therapeutic measures for the use of mercury, mercury succinimid may be used intramuscular, and mercury in oil is the least desirable of all. Bismuth, a relative new drug used in the treatment of lues, the aqueous solution being the most effective. The iodides may be administered by mouth or intravenously as sodium iodide.

As we have intimated before in this essay we consider the arsenicals the drug of choice in the treatment of meningo-vascular lues because of the rapidity of its action and ease of administration. However, there is always the danger of the Herxeimer's reaction and all acutely ill cases shoud be carefully prepared before we begin the use of the arsenicals. Mercury and the iodides are most effective for this purpose. Spinal puncture, aside from the fact that it is an invaluable diagnostic procedure, is also valuable as a therapeutic measure. It lowers the pressure of the spinal fluid and assists in causing the spirocheticidal agents to penetrate the area of inflammation. Formerly we used the Kidel-Moore intraspinous method of treatment, which simply consists of giving the patient arsphenamin or neo-arsphenamin and waiting a time interval when the arsenical is theoretically supposed to reach its maximum concentration in the blood stream and withdraw a small quantity of blood centrifuge, tap the spine by spinal puncture and withdraw ten cc of spinal fluid and replace by the blood serum. We believe this long drawn procedure unnecessary and modify it by first doing a spinal puncture, allowing fluid to escape until the pressure is lowered then give neo-arsphenamin intravenously. The cerebro-vascular system will quickly replace the serum withdrawn from the blood, so in the end the results are the same.

Every man who treats syphilis has his own pet method or routine of treatment. In our luetic clinic at the Community Hospital, where we treat a large number of syphilitics weekly we have followed the continuous overlapping method of treatment, which has been found to be most effective. This consists of a course of eight injections of neoarsphenamin followed by a course of ten injections of mercury, which in turn is followed by neo-arsphenamin, the last three or four doses of each course overlapping. This should be continued over a period of fourteen to eighteen months with occasional spinal puncture. Should there be any signs of relapse we switch to arsphenamin. The iodides are administered after the first course given by mouth.

## THE SIGNIFICANCE OF CARDIAC PAIN*

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Murray.

"There is purpose in pain, other
it were devilish."

—Owen Meredith

Pain has been spoken of as a language of disease, but it is often particularly meager, many times greatly involved, frequently misleading and sometimes perplexingly silent. Moreover it may be so greatly modified by the individual as to be deceptive. The hyposensitive type of individual will endure severe pain with little out-cry, while a highly neurotic subject becomes an amplifier. Ordinary pain in a neurotic is increased to the nth power and makes them the subject of the physicians greatest solicitude. The phlegmatic are notoriously uncomplaining. The stoic minimizes pain that is of serious import. The neuropath, in acute conditions, suffer agony, and in chronic diseases, though he may not suffer, causes those around him to suffer greatly.

As pain is purely a subjective symptom, its intensity must be estimated by the statement of the sufferer, by the manifestations of its presence, and by the nature of any lesion which may be discovered as its probable cause. Much depends upon the skill and experience of the observer in judging individual susceptibility. The most important variations in pain are personal or individual. But it is to be remembered that the pain suffered by an abnormally sensitive person has as real an existence in consciousness as the slight discomfort felt from the same cause by those of less acute pain perception.

Twenty-two out of one hundred of you doctors will die of heart disease, not including those who will die of the results of arterio-

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sclerosis. Cancer will claim eleven out of the same number; Bright's disease will claim ten; Pneumonia will claim six, and so on down the line with the disease that will terminate our earthly existence. To believe that the mortality rate would remain fixed as the above set up would be doubtful assumption, as all indications are fairly clear that the mortality rate of the cardio-vascular diseases for men of the age period of the most of us is increasing disproportionately. The last generation saved more babies, but we have been losing even more in the most productive period of life, between the ages of forty and sixty years. Therefore, I make no apology for bringing to your attention one phase or symptom of a disease that now ranks first in the cause of death.

Physicians in general practice and Cardiologists, those who have made a special study of the diseases of the heart, deal with the four outstanding symptoms of heart disease which are edema, dyspnea, palpitation and pain. Pain is the first symptom, most frequently, that causes the patient to consult the physician. Shortness of breath is usually the earliest manifestation of a gradually failing heart muscle, but often the patient does not heed this warning and waits for the pain symptom to move him to consult the doctor. It is stated by some cardiologist that twenty-five per cent of all cardiac patients have pain as a primary complaint. Most of these patients have degenerative heart disease and are able to come to your office. Hutchard stated years ago that eighty theories had been advanced as to the cause of cardiac pain, but after careful study and reviewing, only three of them remained as possible causes of cardiac pain. They are: (1) Due to decreased blood flow to all the myocardium, caused by an arterio-sclerotic narrowing of its arteries or temporary spasm of same. (2) Stretching of an acutely inflamed or chronically inflamed aorta or aortic ring incident to exercise. (3) Exhaustion of the heart muscle due to decreased flow or defective blood supply due to narrowing of the coronary arteries, or due to damage to the heart muscle by occlusion of a coronary artery or one of the branches, or other causes. Some students of this subject still make it clearer by stating that all true heart pains are caused by ischemia or anoxemia of the heart muscle, and that exertion or violent exercise appeared to be the most frequent exciting cause for pain in the cardiac diseases when pain is a factor at all.

All precordial pains are not due to diseases of the cardium. To properly evaluate pain in this region it will be necessary to differentiate the pain in this region due to extra-cardial diseases. The chief causes for pain in this area, not due to cardial disturbances are: (1) Pleurisy, especially of the diaphragmatic type; (2) Intercostal neuritis and neuralgia; (3) Myalgia; (4) Diseases of the ribs and costal cartilages; (5) Gastric diseases; (6) Rheumatism; (7) Neurosis; (8) Arthritis of the spine; (9) Diseases of the left shoulder joint; (10) Diseases of the mediastinum. The scope and length of this paper will not permit me to take up each of these conditions that simulate cardiac pain, but it is necessary that you be familiar with the symptoms of each disease that you may conclude a correct diagnosis of the conditions present in a given case.

Now, since we know some of the conditions that produce pains in the precordium that are not cardiac in origin, lets name the things that actually produce heart pains. White and Wood, Boston, possibly have the best classification of the true cardiac pains. It follows:

(1) Simple fatigue pains.
- (a) Chronic hypertension.
- (a) Aortic stenosis or regurgitation.
- (c) Mitral stenosis.
- (d) Pulmonary stenosis-congenital heart disease.
- (e) Adherent pericarditis.
- (f) Paroxysmal tachycardia or paroxysmal auricular fibrillation or flutter.
- (g) Permanent auricular fibrillation or flutter with ventricular rate.
- (h) Permanent coronary narrowing due to arterio-sclerosis.

(2) Nervous heart pains, including effort syndrome.

(3) Paroxysmal heart pain, true angina pectoris.

(4) Pain of coronary thrombosis.

(5) Aortic pain of syphilitic aortitis and aneurism.

(6) Pain of pericarditis.

(7) Frequently a combination of these factors occur.

I will briefly discuss the seven headings under which cardiac pains are classified and give to you, in a way, the significance the pain may assume in each case.

The simple fatigue pain of the heart due to arterial hypertension is a distress or vague pain caused by a gradual limitation of the reserve power. This distress comes on from work or effort which previously he had been able to undertake and do with comfort. Every case of hypertension should be examined for heart disease. For if organic disease is not present, regard the case as one

of potential heart disease, for sooner or later you will have it present. As to fatigue pain of the cardium caused by the valvular diseases, the pain is not so significant because other symptoms are more prominent in your study to assist you in making the diagnosis. The simple fatigue pain of adherent pericarditis or mediastino-pericarditis is also another condition in which the pain is not such an important factor in making the diagnosis as a history of the pericarditis; infections, especially of rheumatic origin; tuberculosis; Bright's disease; pneumonia; etc. Many times pericarditis is painless, but when pain is present it usually involves the extrapericardial tissues as the diaphragm, vessels entering the heart, and leaving it, and the mediastinum. Now the fatigue pain elicited from the fibrillations, tachycardias, and flutters is also another condition in which possibly not so much significance attached to the pain as other symptoms will lead you to a correct diagnosis, suffice to say, there is precordial distress or vague pains which have no special value unless associated with the other symptoms of these pathological conditions. Lastly the simple fatigue pain caused by a permanent coronary narrowing due to arterio-sclerosis. According to Lewis the arteries of the body are rarely quite normal after the age of thirty. The pathological changes increase quite steadily with advancing years. The disease is much more marked in some than in others. There seems to be also an inherited tendency. As a rule arterio-sclerosis is accompanied by a high blood pressure. Its true causes, however, are unknown. The earliest signs of arterio-sclerosis are usually to be found in the aorta by the use of the x-ray. At the wrist the thickening of the radial artery may be felt. A length of the vessel should be emptied of blood by occluding it above, wiping out the blood and then occluding it below. If the stretch of the empty vessel can be felt and rolled under the finger, or if its surface is irregular, it is diseased. Strictly speaking, disease is only recognized in the artery in which it is observed but arterio-sclerosis is almost always widespread, and sclerosis at one place means sclerosis at another. So the chronic narrowing, gradual closure and sclerosis of the coronary arteries are responsible for the pain of angina of effort, and by decreasing the nourishment to the heart muscle, leads up, to failure with congestion, a condition with which you are most familiar. So the pain of this condition may last for hours or for days. The pain, when severe, is not relieved as in angina pectoris with nitro-glycerine, but requires heavy doses of opiates.

The pain of effort syndrome of breathlessness of effort, the athlete's heart or soldier's heart, is a disease of growing young men as a rule, but the young woman may also be affected. In practice, the general rules should be to regard breathlessness, the cause of which is not obviously attributable to renal disease, bronchitis, infection or neurosis, as a manifestation of the effort syndrome when it occurs in young people who present no signs of structure mischief in the heart, or insufficient signs to be consistent with the symptoms. Then, again, nervous breathlessness disappears in sleep.

The pain of angina pectoris or paroxysmal heart pain is one that interests us most of all. Most writers want us to drop such terms as "pseudo-angina," "reflex angina," etc., because they are false and meaningless. You have no false diseases or symptoms; therefore the use of such terms indicates false diagnoses. A person either has angina pectoris or does not have it. There is no intermediate state in making the diagnosis, says Harrison. This malady, originally described by Heberden under the term "Angina pectoris," is one in which pain of a characteristic type occurs during effort or brought on by the three "e's," exercise, eating, and excitement. It is by far the most common form of malady in which angina pain occurs. The pain may be interpreted as resulting when the blood supply to the heart, or part of the heart, is limited and consequently inadequate when the heart is called upon to do work at a certain increased rate — a condition of relative eschemia or anoxemia. The clinical picture of a sufferer from angina has been painted in so masterly a manner by Vagnez that I cannot refrain from quoting his description. "The first attack occurs in the course of apparently perfect health. After the mid-day meal, on quickening his pace a little, the patient suddenly feels behind the sternum, a pain which starts and alarms him. He walks on, but the pain increases steadily. It extends across the upper part of the chest toward the shoulders, especially the left, passes down the arm of the same side, keeping to the inner side of the arm, to the ends of the fingers, especially the ring and little finger. At the same time there is the indescribable dread, a firm conviction he will die if the agony continues. Mastered by the pain the patient stops walking and as if by magic, the pain stops also. The intermission may last for several days or weeks, or even longer. All seems forgotten when, for the same cause, walking after a meal, the patient reappears with the same symptoms. This time it is more tenacious. The patient no longer tries to master the pain. At each instant he is obliged to

stop, assuming an indifferent attitude before a shop window to avoid attracting the attention of passers-by; but this pale and anxious face, the aspect of suffering that changes his expression, the rigidity of his attitude, the care with which he supports his painfully numb left arm with his right hand, all tell the experienced eye that this saunterer so engrossed by his sensation is an unlucky mortal in the grip of an angina." Thus in this description you have the mental picture of one in the throes of an attack of Heberden's disease. So once an angina patient always an angina patient for the Damoclean sword forever, afterwards, hangs over his head. He may live ten, fifteen, or rarely twenty years; the pain may even disappear entirely, but the possibility of sudden death remains, and the patient can never get away from the organic changes that have taken place in the heart and its vessels. So the pain of angina pectoris, being so characteristic, should lead one, with the other definite symptoms, to a correct diagnosis.

The pain of coronary thrombosis is associated with lesions in the vessel wall of the coronary arteries except in the case of embolism, which is rare. There is an almost invariable absence of effort in the onset of thrombosis states Luten. There is also its conspicuous association with rest which is very significant. By far the most common circumstances of onset is during sleep, particularly in the early morning. So a patient with coronary disease gets angina with exertion, and thrombosis while at rest. Possibly the two most noticeable factors in producing thrombosis of the coronary arteries are, (1) a slowing of the circulation due to a low diastolic pressure in the vessels, and (2) a change in the character of the blood.

Uncomplicated aortic syphilis is often a painless disease. When pain is present it is never so violent as in severe cases of angina pectoris. Ordinarily the sensation is more of a feeling of vague discomfort or ache under the sternum, in the left interscapular region, or occasionally in the left shoulder. There may be a choking feeling, the patient complaining of a "lump" in his throat. The discomfort lasts for hours and, like other syphilitic pains, is worse at night. The Wassermann reaction is positive in about two-thirds of the cases. The x-ray will reveal changes about the aorta. When the syphilitic process involves the coronary orifice or spreads to the aortic valves causing insufficiency, the patient often develops true angina in addition to the less severe pain of simple aortitis. Aneurism, another complication of luetic aortitis, often causes no pain. When, however, the sac pushes forward and erodes the ribs or sternum, or advances backward and erodes the vertebra, severe pain results. The pain is constant, throbbing or boring, often shooting if the intercostal nerve is involved.

The presence of pain in pericarditis is significant when present, but it may be completely absent. When present it radiates along the phrenic nerve, a peculiarity which can be recognized by finding points of tenderness on pressure both in the neck and the costoxiphoid angle. The pain is, of course, due to the inflammation of the sensitive serous membrane. It is the physical signs, however, on which the physician must chiefly depend; of them friction rub is the most important. At first, while the exudate is still soft and sticky, the sound is also soft, resembling the rustling of silk, but as the exudate becomes dry the sound becomes more rasping, developing that quality so aptly named by the French, "sound of new leather." The pain and the friction rub may go and come with the development of effusion or clearing up of same.

Then, as I have previously stated, you may have two or more of these conditions combined to produce cardiac pain, in which case you will have to evaluate properly each sign and symptom in reaching a correct diagnosis.

### Conclusion

(1) It is clear, then, that the heart may be deranged in its action without being diseased. Disturbances elsewhere in the body may give rise to abnormal circulatory phenomena which are often of help in locating the primary disease.

(2) The heart, like the stomach, is a weather vane, and by watching it the physician can often foresee and occasionally prevent the storm which is in store for his patient.

(3) The significance of cardiac pain can be known and be of value in reaching a diagnosis only by a thorough knowledge of the signs and symptoms of heart diseases.

### DISCUSSION

**E. B. Willingham,** Paducah: I hardly see how Dr. Houston could assemble so much real information on one symptom, however, it is a symptom that we can say has a distinction, and that it is the only pain that has earned a place in medicine as the sole symptom and sign of a disease, angina pectoris. If we would always associate with that particular pain the idea that it is a pain of physical effort, and not brought on by numerous causes, we would be in better form to analyze what the pain really means.

We have a patient come into the office and say, "Doctor, I have been having a pain lately that I just believe is in my heart." Maybe he is

a traveling man, and he says, "I have been noticing this a little more and more, and if I pick up my grips and walk a little piece, that pain just hits me so hard I have to set them down and rest. I want to know what is the matter with me."

Well, there is not much use in inquiring of that man, he has already told you what the trouble is; he has the typical pain of effort representing angina pectoris.

The very next man, possibly he is a traveling man, comes in and says, "Doctor, I have a pain in my heart, and it just goes bum-bum-bum-bum, and nearly beats me to death. I have a way that I can't get my breath because of real distress in breathing."

I ask him, "Is the pain the real cause?"

"Yes, but I have it when I get excited." In other words, he has several different causes for this same condition. This pain is not so significant, in my opinion.

When we differentiate between the coronary occlusion pain and the pain of angina, the pain of effort, it is not quite so simple. In fact, recent writers in the literature have been inclined to consider all heart pain of effort coronary disease and due to the same cause, that is disease of the coronary arteries, when in fact that is rather unfortunate, as we have a different condition, one without a background of true pathology, angina pectoris, and the other one that does have a true pathology, the background of occlusion with infarct followed by the symptoms and signs that are very emphatic.

Fortunately, we have a better way of getting at those conditions lately. We have instruments of precision that we can well work out the difference in the two conditions.

Dr. Houston has done well with this subject.

**John W. Scott**, Lexington: It is important in appraising the significance of cardiac pain to be sure that one knows just what cardiac pain is.

Dr. Houston has given us a very complete resume of the causes of cardiac pain. At the same time, perhaps by its very completeness it is a little confusing. It is extremely important for us to be able to say to the patient who comes in with pain which he refers to his heart, whether or not it is his heart which is at fault.

In my experience, the greater number of people who come to me with pre-cordial pain, thinking that they have heart disease, have pain which is entirely unrelated to the heart. Dr. Houston spoke of effort syndrome and soldier's heart. Effort syndrome is not heart disease; it is a nervous system disease with symptoms referable to the heart, and the treatment of that patient is treatment of his nervous system and not treatment of his heart. It has the most disastrous effect on such patients to give them the impression that they have heart disease. In fact, the patient who has heart disease is very apt to have such a strong psychoneurotic response to the knowledge that his heart is affected that the clinical picture is a complex of symptoms referable to his circulatory damage plus symptoms which are referable to the nervous system damage incident to the knowledge that he has heart disease. This often obscures the picture.

I have in mind now a patient who had a perfectly characteristic attack of coronary thrombosis. She was a woman of somewhat nervous type. The electro-cardiographic findings, blood count, rise of temperature, were all typical of a coronary accident. She recovered satisfactorily from this. She soon began having precordial pain which was due to her nervous system response to the knowledge that she had heart disease. This produces a difficult problem in treatment.

It is extremely important in these patients who do not have heart disease, such as these patients with effort syndrome, to insist on the fact that it is not heart disease and to avoid giving them cardiac drugs, not only because they are useless, but because you cannot convince a man, no matter how much you tell him that his heart is not affected, of your sincerity when you give him digitalis and tell him that he doesn't have any trouble with his heart. This seems self-evident, and yet it is a thing that is done time and again.

One is, in a way, casting anchor to windward by giving the patient a little digitalis and at the same time telling him he doesn't have heart disease. For one thing, perhaps he has a lingering idea that he may be wrong and that if he is wrong the digitalis will help his patient. Or, perhaps, that if he should be wrong and the patient should die, his friends may say "Well, Dr. So-and-so thought he had heart disease all the time and just didn't tell him. Wasn't he giving him digitalis?"

If you have the courage of your convictions and are convinced the patient has not heart disease, avoid by all means giving him a drug which the patient thinks of as a cardiac drug. It does him harm.

This is one symptom which is much better disregarded than over-regarded. More patients are hurt by having their cardiac pain and its significance emphasized by the doctor, than are helped by it.

There are few disasters to the heart which are incident to neglect of cardiac pain. The patient with angina of effort will stop when he has his pain, he will have to stop; he doesn't have coronary thrombosis from neglect of that.

There are one or two other things that I would like to comment on, and one is the state-

ment attributed to Sir Thomas Lewis that no patient has normal coronaries after thirty. What is normal? If no individual after thirty has normal coronary vessels, aren't abnormal coronary vessels normal after thirty? What is normal for me is not normal for the man of twenty-five. The normal vessel for the man over thirty is the mean of arteriosclerotic change which is incident to that age, and it would seem absurd to say that nobody has a normal condition after he is thirty. The abnormal condition then becomes a normal condition.

I may have misunderstood Dr. Houston about another thing, but I got the impression that he said sclerosis of one vessel implied sclerosis of other vessels. There is no process in any tissue of the body which is more variable in its incidence and which is characterized by such a difference of localities as is arteriosclerosis. The patient is apt to have, for instance, cerebral sclerosis, and have coronaries quite free. Another patient will have sclerosis of the kidney vessels with cerebral vessels and coronaries that are free, and so on. Sclerosis of the radial doesn't even create an implication that there is sclerosis of the coronaries.

An article appeared some two or three years ago by one of the great men of American medicine, Lewis A. Conner, upon cardiac neuroses. He discusses the subject in his usual illuminating style, somewhat in this way: that there are patients who have cardiac neurosis because they have a disorder of the nervous system, without cardiac disease; there are other patients who have average, normal nervous systems who have cardiac disease and by reason of their cardiac disease develop a cardiac neurosis, I would commend to anyone who is interested in this subject this article by Dr. Conner, which appeared perhaps three years ago in the Journal of the American Medical Association. Above all things, we should avoid over-emphasizing cardiac pain to the patient.

**W. E. Gardner,** Louisville: I want to say just a word in reference to Dr. Houston's paper. He referred to cardiac pain of neurotic origin, and Dr. Scott almost took my thunder in regard to what I might have to say in this respect, except I am going to take somewhat of an opposite view to Dr. Scott in this regard. Just incidentally, before I take up that phase of my discussion, I should like to refer briefly to arteriosclerosis.

Most of the modern textbooks on neurology claim now that cerebral arteriosclerosis may occur as early as the fourth decade in life. That, of course, is between thirty and forty years of age. So it seems to me that Dr. Houston's statement that there perhaps is more or less narrowing of the blood vessels after thirty years of age may not be so wild after all. We probably have a beginning of changes in our blood vessels then.

As arteriosclerosis becomes definite and more advanced during the middle and latter years, as Dr. Scott has said, it may spend itself on one particular organ more than another. In one individual we may have the process showing itself more distinctly in the brain, another in the heart, another in the kidney, and so forth, but we do have to begin to recognize now that cerebral arteriosclerosis is certainly not a disease of old age alone; it is also a disease of active life, and it is a part, frequently, of the more or less generalized process which shows itself in coronary disease of the heart.

About pain of neurotic origin, if organic disease can be eliminated in this type of pain, then we are very prone to assume that cardiac pain is due to some state of anxiety. We are more likely to see tachycardia than cardiac pain, however, in the anxiety neurosis, where an individual is confronted with some unhappy situation, be that domestic, financial, or social, which he is not willing to admit frankly. He doesn't want to be a quitter, so to speak, and tries to bluff through, and doesn't want to admit a weakness without some legitimate cause. Therefore, unconsciously, he will develop the fear of heart disease, usually a tachycardia, occasionally pre-cordial pain.

This is considered an escape mechanism from the unhappy situation. In other words, the pain gives the individual a legitimate excuse to be unhappy about his situation. Therefore, it has been held that perhaps it is not always best to try to disabuse his mind, Dr. Scott, of the idea that he has heart disease, if he has an anxiety neurosis. In other words, he temporarily has a psycho-biological gain through illness. If he can be relieved of an unhappy financial, social or domestic situation by the fear of heart disease, he may actually escape a psychosis, a mental breakdown; so therefore let him believe temporarily —do not emphasize it, of course— that he has a heart pain. Perhaps you don't admit it to him, but let him taxi along; don't try to disabuse his mind too thoroughly of the fact. If you do, it is almost impossible to convince him. But if you could convince such an individual by x-ray examinations, electrocardiographic studies, a good internist, and thorough physical examination that he doesn't have a heart disease, you might throw him, if he has an anxiety neurosis, into a psychosis Do not disturb too soon the escape mechanism, and, as stated above, the temporary gain through illness.

That is perhaps a new phase of the situation so far as the average practitioner is concerned, but it is not such a serious situation in the long run. These people will go along for months.

How do you relieve them? The only way to relieve this sort of tachycardia or precordial pain in anxiety neurosis is to go into these unhappy situations, get the patient to talk about them, get him to go back and talk about his original worry, if it has been a loss of money or some domestic or social upheaval in his life, take him back to it. It is very easy to tell patients, "Don't worry about this, be brave, throw it off your mind, put it out of your mind." People who attempt to put unhappy situations and things of this sort out of their minds simply crowd them down deeper into the unconscious. If we can get the patient to go back to his original worry, face it frankly, and come through, let him react normally, show an expression of temper, sorrow, whatever his emotional reaction may be, he is much more apt to get rid of his functional pain of neurotic origin.

We must be very careful always, of course, not to overlook the presence of organic disease. The neurologist or psychiatrist would be doing patients great harm if he made an assumption of a neurosis without having had thorough physical studies. It is a big responsibility for the neurologist or psychiatrist to assume until all possibilities of organic disease have been entirely eliminated.

**E. B. Houston,** Murray, (in closing): I certainly appreciate the very generous discussion that the paper has provoked.

Dr. Scott brought out some very fine points. I wonder, though, if you have an arteriosclerosis of your radial artery; knowing the same blood that courses through the radial artery courses through the coronary arteries, why wouldn't the same condition be present in the coronary arteries?

Like Dr. Scott, I don't like to think that at thirty years of age I have to become diseased in the vessels of the heart. But I still subscribe to what Osler taught, that a man is about as old as his arteries. I have seen some cases at forty years of age that had a well-marked arteriosclerosis of the radial artery. I can't understand why we would have arteriosclerosis in one artery, with the same blood supplying nourishment and lymph to all the body, and not have it in any other artery at the same time.

There is a big side to the problem of neurosis; there is an economic side to heart disease. The earlier we physicians make a correct diagnosis and assure the ones who believe they have heart disease that they do not have it, so they can get back to work, the better for all concerned.

## FIVE CARDINAL SIGNS OF DANGER IN PEDIATRIC DIAGNOSIS*

T. Cook Smith, M. D.

Louisville.

In daily clinical work at the bedside of infants and children, our diagnostic aims are two-fold: First, a careful setting apart of those in a dangerous condition from those whose diseases are more benign. Second, diagnostic studies leading to complete and accurate diagnosis of single or multiple conditions as they actually exist in the patient. Accurate and complete diagnosis is time consuming, but a technique for quickly distinguishing the danger signals should be developed to a high degree of efficiency. We may not wish to study our cases to ultimate academic satisfaction if they get well promptly and thoroughly, but it is a definite duty for us to develop a high percentage of accurary in protecting our patients quickly and efficiently. In reviewing hospital records, we find benefit in watching the difference between admission diagnosis and discharge diagnosis. It is also of great value to watch clinical diagnosis and compare it with autopsy findings. Clinicopathological conferences carry out this comparison and help us to see the vital points at which we need a strengthening of our diagnostic equipment. I have enumerated in this paper five cardinal points for discussion. Of course, we might make the list of great length, but the five which I shall mention today are those which we find to be of paramount importance —indeed, of such importance that they should be carefully checked before the doctor leaves the bedside of any patient for whom he has taken responsibility.

I am among those who find great benefit in laboratory procedures, but it is ridiculous to reach out for their help before making use of basic and simple examinations of certain physical functions. We find those discussed in this paper most often overlooked at the bedside of this age group.

1. Stiffness or rigidity of the neck and abnormal tension of the fontanel. It happens too often that a patient has been carefully studied by laboratory methods, but the physical examination has omitted this important observation which could have been carried out in the space of a very few minutes. The child with a stiff neck does not necessarily lie in a peculiar position; in fact, he may be perfectly flat in bed, although there is a tendency to turn to one side or the other. It must not be forgotten that a child under a

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year old with meningitis frequently has no other signs of that disease than fever, vomiting and increased tension of the fontanel. It has been shown in some groups of cases that infants suffering from meningococcus meningitis have often been ill for two weeks before diagnosis and the beginning of serum treatment. There are pit-falls besetting the path of one who tries to use these signs, but they are not many. Stiffness of the neck occurs in other diseases than meningitis, but should always be looked upon with great suspicion. The fontanel, of course, is tense under certain other conditions such as hydrocephalus, in some types of difficult breathing, and when the child is crying or straining in any way. It requires quite a little practice to detect a slight increase in this tension, but mothers sometime say, "The soft spot is bulging," in extreme intracranial pressure. Meningitis and neurological diseases are often overlooked because of failure to see these signs.

2. Look at the throat and ear drums of every child for whom you have taken any responsibility. It is the three year old patient who has had diphtheria for over three days before treatment is begun who dies, and children under five seldom complain of sore throat. Nothing makes the pediatrician or the children's doctor as unpopular as a careful look at the throat. We all lose patients on this account and gain other people's patients on this account. However, never visit a patient of pediatric age without examining this part of the body. The ears are often a silent cause of unexplained fever and sepsis. Do not expect the pediatric patient to tell you about it.

3. Careful palpation of the abdomen in all cases, watching particularly for muscle guarding, for masses and for tenderness. Crying may obscure all signs. Distention of the bladder produces bizarre signs, but the same clinical findings are present in infants, children and adults with appendicitis. General peritonitis and appendiceal abscess are found all too often because acute appendicitis was overlooked. One out of every thirty-seven admissions to the Boston Children's Hospital for a period of ten years was appendicitis. Dr. John Howland before his death said, "It is not difficult to make a diagnosis of appendicitis in children if appendicitis is thought of while the doctor is examining the child."

Never forget intussusception.

4. Consider the type of breathing. It is not necessary to emphasize the need that breathing continue, but we do overlook striking danger signals to be seen in altered breathing. Beware of slow and very deep breathing as well as extremely rapid types. Increasing acidosis of alarming degree is sometimes realized only in that way. Learn Cheyne-Stoke's breathing, the sighing of tuberculous meningitis, and the cerebral pressure signs.

The dyspnea accompanying the failing heart is more important than the murmur. The respiratory rate in pneumonia is more important than percussion sounds and rates.

5. Look at the skin—all of it. Undress the patient. There is a broad field for discovery in the large expanse of the skin. We know the "sick appearance" largely by a look at the surface of the body, especially the face.

In the dangerous types of diarrhoea, a consideration of the ashen, dehydrated skin, is more important than a study of the stool.

Manifested in the skin we see shock, fever, edema, rashes of dangerous diseases, hemorrhage and cyanosis, while in the shadows which play upon it, we learn much about the motions of the internal mechanisms of the body.

## Summary

We fit rapidly into grooves in daily medical routine. We develop rather fixed steps in examination of the patient. It is important that we include in even cursory examinations of sick infants and children the following:

1. Examination of the neck for rigidity and palpation of the fontanel for increased or diminished tension.
2. Examination of the throat.
3. Palpation of the abdomen.
4. Consideration of respiration.
5. Inspection of the skin.

Examinations help to make diagnoses as well as to demonstrate them.

## DISCUSSION

**J. H. Pritchett,** Louisville: We have all heard, I am sure, fine sermons by great ministers, and they probably contained less moral than this short, snappy, pointed paper, this morning.

The time has passed in which we can say, "Stick out your tongue," feel the pulse, hold the watch, put it back in the pocket and say, "Give him quinine and I will be out tomorrow."

I remember years ago Dr. Barbour brought a child before the class and said to us, "What do you see?"

Well, we didn't see much, as it happened. Then he told the story of all eyes and no eyes.

These are five simple points that if practiced day by day will make for us a much better diagnosis and be of great help, of course, to the patient.

We have all been chagrined, at least I have, on numerous occasions when I thought I had examined the throat properly, to have some throat man inform me the patient had diph-

theria, or maybe I have overlooked an abdomen when I thought I had gone over the abdomen pretty carefully, maybe too hastily, with cold hands, probably too roughly, without getting the child to relax. I have on two or three occasions overlooked an acute appendix. You can keep up a running line of talk to get the abdomen to relax, and probably begin on the left side and come down around on the right side.

I am quite sure if these points are observed routinely, with an examination of the ear drums, the throat, the abdomen, the fontanels, the appearance of the skin, they will stand you in good stand. Look, feel, listen and think well, is a good medical slogan.

**Philip F. Barbour,** Louisville: I think one of the greatest faults all of us have is that we don't see with our eyes. I think it is Osler who makes the statement somewhere that it isn't so much what a doctor doesn't know as what he doesn't see in a patient that gives him trouble.

Occasionally I go to see a child and the family tell me that they called the family doctor and he sat on one side of the room and looked over at the child on the other side of the room and prescribed for it. You have to be a very keen observer to recognize all the troubles in the abdomen when sitting across the room. There is no question of modesty or lack of modesty in stripping a child, so there is no reason in the world why you shouldn't examine a child, and examine it quickly. The short horse is soon curried, so it doesn't take long to examine the child's abdomen, listen to the heart and chest, look at the throat and examine the ears and be done with it in half the time you would take to examine an ordinary adult.

Be sure that you look at everything about the child, because there are many things that will slip up on you unless you are keenly observant. Then have a mind that records the things that appear to you. How many times we see a thing and it makes no record on our cerebrum and we fouget about it. If we train ourselves to think out why this, that or the other thing appears, then we are in position to investigate our cases properly.

Too often we see the results of the thing but we do not try to establish what is the cause. If you find a child with large glands in the neck, be sure to look at the throat and nose and ears and find out the cause, and you won't have so many death certificates to sign.

**John W. Scott,** Lexington: While we recognize the importance of rigidity and increased muscle tone in acute inflammation in the abdomen, it must not be forgotten that acute inflammation in the abdomen may occur without this sign. After the rupture of an appendix it is quite possible to have general peritonitis without a rigid abdomen, particularly in the child.

There is one accessory to the examination of the abdomen, particularly for acute inflammation, which I think should be borne in mind, and that is a rectal examination. I see very few children and no infants, so I don't know whether this is as applicable to the infant as it is to the older child. In the latter, as in the adult, it is a valuable accessory to the palpation of the abdomen itself.

**Virgil Simpson,** Louisville: I see no particular reason for drawing lines of distinction between the proper and complete and satisfactory physical examination of a child as contrasted with that of an adult. After all, diagnosis means as complete a survey of the patient under consideration as it is possible for us to make. The only difference between the child and the adult is the question of time. Adults will put up for a longer period of study; you can keep them on the table under examination for a longer period; children tire, they fatigue and get restless. As a consequence, the man who is dealing with the younger group of patients, I think should keep in mind the necessity of some speed in his work, whereas the man who is dealing with the adult more particularly is not so obligated.

There is another question that would arise in connection with Dr. Smith's rather satisfactory five-point study, and that is the consideration of the kidney. It is not at all infrequent that febrile processes give marked evidence of infection of the kidney that can be so easily determined by a study of the urine. It is not to be overlooked that pyelitis in the child is not an infrequent cause of clinical manifestations.

**T. Cook Smith,** (in closing): I think there is justification in drawing some distinction between the most important points necessary to examine the child and those which would be most important for an adult, because an infant or a child is not a little man in a physiologic or pathologic sense. Of course, we do not as a rule look for arteriosclerosis in the child, nor feel an old man's fontanelle.

A thought occurred to me while these other papers were going on that I think would be of some value in a practical way in connection with the administration of serum of different types. It has been my fortune or misfortune to be associated with a Contagious Hospital for the last ten years, and I think a very practical thing to do with serum to be given intramuscularly is to give it into the anterior muscles of the thigh. Given there, there are lots of muscles and not so much fat as you encounter in the buttocks; the patient can lie quietly and comfortably on the back in bed. I particularly urge against the injection of serum into the rectus muscles over the abdomen because it obscures other signs which you might want to watch later. Likewise in the back, it obscures and makes difficult examination, also in the chest, and in the buttocks a painful life, at least, is led. I think the most practical thing is to give that serum into the anterior quadriceps muscles.

# HYPEREMESIS GRAVIDARUM*

S. P. Oldham, M. D.

Owensboro.

Hyperemesis Gravidarum is perhaps one of the most outstanding subjects for discussion among Obstetricians. I know of no pathology which has presented more varied opinions as regards care and treatment.

In recent years the subject of the mutual relation of pregnancy and the organic diseases, associated with and incident to gestation has received wide attention. It was in the study of these inter-relations that investigators soon realized that, for a sound understanding of abnormalities, it is first necessary to comprehend and control normals. In consequence thereof, we are coming more and more to recognize the necessity of a proper knowledge of the normal structure and function as a preliminary to the diagnosis of pathologic lesions. Thus, as knowledge advances, it becomes evident that pregnancy affects the entire organism creating radical changes, not only in the reproductive organs, but in the other systems as well. In the past, such alterations in organic structure and function were attributed largely to the nervous impulses originating in the pregnant uterus. Recent investigations, however, tend to correlate this with higher hyperactivity and hyperfunction of certain ductless glands.

During the past two decades there have been elaborate investigations of the relationship of pregnancy to these glands. From the enormous amount of literature which has accumulated on this all important subject, one is apt to get the impression that our knowledge in this field is detailed and satisfactory. In reality, our understanding of these relationships is only in its beginning. Just now it is impossible to answer many a question with finality. At the same time it is true that numerous new facts have accumulated which may provide a key to the proper explanation of certain hitherto obscure phenomenon.

The tendency to nausea during the early morning, often with vomiting, manifests itself in a large number of pregnant women usually about the fourth to sixth week, but in many instances it may appear earlier and has been known to appear even before the first period has been missed. Usually about one-third of pregnant women have nausea and vomiting as a marked symptom. Another third complain of this occasionally in a mild degree, while the other third are entirely free from it. That these symptoms are of a nervous character is manifested by the fact that their occurrence is more pronounced in those who are temperamental and easily excited.

The thirty-three and one-third per cent who have nausea and vomiting to a marked degree, should be classified into three types, namely: First, Hormone or Ductless Gland Type; Second, Metabolic Type; Third, Pathologic Type.

## Hormone Type

Of these three types, I feel the Hormone Type is the primary example of Hyperemesis Gravidarum and the other types are as a result of the imbalance of the Hormone. There are considerable numbers of women who, either at the premenstrual or during the menstrual period, exhibit an extreme unstable nervous equilibrium resulting in severe nausea or vomiting and manifest numerous psychic nervous disturbances, due, in all probability to some sex Hormone deficiency.

It has been demonstrated that the menstrual blood shed on the first day usually contains a considerable quantity of Female Sex Hormone, which is materially reduced within a few hours after bleeding starts and becomes less frequent throughout the period. If pregnancy takes place the Hormone disappears from the circulating blood. The explanation of this finding we are unable to offer at present, although the fact that the Hormone reappears when placentation is definitely established, makes one suspect that the full elaboration of the placenta must have something to do with the renewed high level of Hormone concentration in the blood.

Franks and Goldberg have shown that the blood of eighty-five pregnant women was examined during the first to fourth week of pregnancy and that the Hormone was not discovered in the circulating blood. From the fourth to eighth week the Hormone was found, only once in fifteen cases in sufficient quantity to give a mouse dose, while from the eighth to twelfth week more than half of the patients showed a good plus reaction. Thereafter the Hormone was detected with more and more regularity until in the last four weeks of pregnancy it was found in every case.

In view of the above stated and proven facts, one must conclude that the Sex Hormone becomes a considerable factor in the role of pregnancy and that the imbalance of the Hormones may be primarily the cause of Hyperemesis Gravidarum, which is the result of an excess of Corpus Luteum excreted at the time of conception. This excretion becomes a foreign proteid circulating in the blood and in time brings about a Hormone imbalance of the entire endocrine system, which disturbs the central nervous system, thereby producing vomiting, metabolic changes and final toxicosis.

It would seem, therefore, that there must

*Delivered before the Kentucky State Medical Association, at Murray, September 11, 12, 13, 14, 1933.

be, at the time of conception, an excess of Corpus Luteum and a deficiency of Sex Hormone, or I would term it an imbalance of Hormones until such times as placentation takes place and the placental Hormone becomes a buffer substance against the Corpus Luteum, balancing the Hormones, as it were, and relief of the patient ensues.

Believing that nausea and vomiting of pregnancy is the result of some Hormone imbalance and convinced of the fact from reports of the exhaustive research handed down by such authorities as Allen, Dersey, French, Schnell, Zondeck and many others, the placenta does excrete a Hormone (whether it be anterior pituitary or some of its various Hormones), which has not been conclusively isolated.

I attempted an experiment about thirty years ago, in which I injected ten CC's of placental blood, intramuscularly, into a patient suffering from severe Hyperemesis. I was agreeably surprised and much gratified to find that, within twenty-four hours of the injection, the patient was very much improved and was able to take some food,—a thing which she had not been able to do for days. However, I did not concede the relief of this patient entirely to the injection of the placental blood, for she had received the regular routine treatment for Hyperemesis. Realizing that this remarkable improvement might have been a mere coincidence, my opinion that there might be something in the placental blood theory became very much strengthened and I decided to experiment further.

Realizing also the crudeness of this method and fearing that to use blood that was not Wassermann free might get me into serious trouble, I hesitated for some time to go forward with my work. I then attempted to arrange with some Biological Houses to make up some Placental Blood serum for me. Being unable to interest any of the manufacturers in this project, I began to collect placental blood myself and by the help and association of my good friend, Dr. Samuel Hainline, began to use the serum made therefrom on rabbits. First, we collected the blood from the placenta as soon as the cord was severed from the baby. This blood was centrifuged, autoclaved, suspended in normal salt solution and placed in a refrigerator until ready for use. We tested the toxicity by first injecting one CC in the vein in the ear of a rabbit. We then tried two CC's and last five CC's were used without any toxic reaction. We were then assured of the fact that it was non-toxic, observing all the while to see if the rabbit would be brought to estrus. In this we were disappointed, as the serum seemed to have no effect as to an estrus producing serum.

That Corpus Luteum plays an important part in the development of the foetus, has been claimed by Newell, Allen, Pratt and others. In their experments they have shown that, in the absence of Corpus Luteum abortion will ensue. With this idea in mind, we injected a rabbit ten days pregnant, to determine whether the serum would destroy the Corpus and if so to bring about abortion or miscarriage. On the seventh day after the serum was injected, the rabbit died—seemingly from eclamptic seizure. An autopsy showed a Red Hepitization of the right lung with no apparent pathology in the left lung. The kidney and liver were normal while the uterus showed eight enlarged sacs or folds which contained macerated foetuses. The ovaries were slightly enlarged with no Corpus Luteum present, so far as we were able to determine. Whether the rabbit died of toxemia as a result of the placental serum or from a toxicosis due to the macerated foetuses or whether death was due to pneumonia, remains a mooted question.

Another rabbit, fourteen days pregnant, was injected with five CC's of placental blood serum and three days later with ten CC's. No reaction followed and no toxicity. The rabbit seemed full of life and normal in every way. On the thirty-first day, which was the duration of gestation, the rabbit went into labor during the night and because of the carelessness of the care-taker, rodents devoured the foetus, leaving only small fragments of the head, feet and so on. We were unable to determine whether the rabbits were born dead or alive. This misfortune is regretted very much, as it put an end to a report which I would have been very enthusiastic to have brought you at this time. However, I shall continue this experiment, hoping at some time in the future to offer something conclusive along this line of thought. It is to be hoped that the Biological Houses will soon be sufficiently interested to make a placental blood serum that can be used in furthering this experiment.

### Metabolic Type

That Metabolic disturbance becomes a factor in Hyperemesis Gravidarum cannot be disputed, but, as stated in the outset of this paper, I am convinced that any Metabolic changes which may occur, are the result of Hormone imbalance. There are a considerable number of pregnant women who exhibit a mild degree of hyperthyroidism as evidenced by increased metabolic rate, increased pulse rate and an unstable nervous equilibrium and Hormone imbalance. However, I would not leave the impression that all pa-

dents exhibiting evidence of hyperthyroidism have a pronounced Hyperemesis Gravidarum. In many such patients who have passed beyond the Hormone imbalance stage and are suffering from hyperthyroidism, per se, Lugol Solution, either orally, per rectum, intramuscularly or intravenously would be indicated and much good might come from such treatment.

### Pathological Type

Pathological symptoms reveal nausea and blood in the vomitus accompanied by albumin with diacetic and acetone urea. In view of our present knowledge and from investigations of such authorities as Titus and Givens, there is claimed to be a deficiency of carbohydrates in the maternal organism, due to the unusual demand of the foetus and if the diet of the mother does not supply this need, the reserve store of glycogen in the liver is drawn upon, resulting in pathological changes in the liver. If the destruction has not gone too far, the administration of glucose by venoclysis will regenerate the damage done to the liver cells and will aid the liver in its fight against toxemia. In fact, I am of the opinion that a moderate glucose urea in pregnancy is advantageous rather than detrimental, because it forms, as it were, a barometer against any acidosis. In other words, moderate glucose urea, per se is a check against acetone or diacetic acid and should not be regarded as pathological. If fatty degeneration has taken place to any great extent, glucose cannot be absorbed and as it is, in this event, stored, extreme toxicity exists, followed in most instances by coma and death.

It is to be hoped that some Hormone will be discovered which will be beneficial in the treatment of Hyperemesis, whether it be Prolan A, Prolan B, Theelin, Amniotin, Antuitrin S, Placental Blood Serum or what not. I believe that we are at the very threshold of the solution of this vexatious malady and at no far distant day will come forth some Hormone which will, through its use, reveal this mystery. Until such time we must needs resort to other remedies for relief.

Mild cases are treated by a high carbohydrate diet at frequent intervals with liquids between feedings together with midnight and early morning lunches. In addition, of course, the bowels should be regulated and any nose and throat disorder treated. Dilute Hydrochloric Acid in half to one CC, given three or four times daily, is very effective in many cases. In moderate or more severe cases, nothing by mouth should be given from forty-eight to seventy-two hours from beginning of treatment. Luminol or Sodium Amytal per rectum, should be administered every six or eight hours as condition demands. When dehydration is manifested, intravenous solutions of ten per cent glucose in one thousand to fifteen hundred CC's should be given three times daily, and, if necessary the insertion of Andrews' nasal tube which should remain from twenty-four to forty-eight hours, then removed and replaced later if needed.

Through this tube the patient can be fed Dextro Maltos or Karo Syrup, mixed with skimmed milk, Dryco, or more preferably butter or Lactic Acid milk. When tube is removed, dry food such as cereals, crackers, toast, mashed potatoes, celery or head lettuce with fruit juices are permissible. If this plan of treatment proves unsuccessful, we must resort to feeding by venoclysis. In my experience, I have found no method of venoclysis quite so satisfactory as the apparatus devised by Dr. George Hendon. I believe that exclusive of all other inventions furthered by Dr. Hendon, this one alone will prove a living monument for generations after his demise.

By this procedure, the patient can be fed for days through the blood vessel and can be given such medication as needed by injecting it, hypodermatically directly into the blood stream though the tubing and in no way disturbing the patient. However, I do not use the cannula, as recommended by Dr. Hendon. I have substituted the ordinary Coffman Syringe (all of you are familiar with this little syringe) and a 20 gauge needle. I find this more convenient, in that, the piston can be pushed in at intervals, washing out the vein and prohibiting any formation of clots and can be used for hours without producing any inflammation of the blood vessel. The required number of CC's can be given, the needle withdrawn, and the same vein can be used again if necessary, whereas if the cannula is used over a long period, phlebitis will result and, of course, the destruction of the vein will ensue. There is no doubt, in my mind but that venoclysis is a life saver to those suffering from Hyperemesis in the pathological stage.

I have not mentioned any kidney pathology in this paper, as this complication should be classified as toxemia of pregnancy, pre eclamptic and eclampsia.

I am enthusiastic in the opinion that placental blood or some anterior pituitary Hormone, will in no far distant day, give the same immunity to Hyperemesis Gravidarum as Kohn and Chu have given to Measles, Polcomyelitis and Scarlet Fever.

### Conclusion

It will appear that a study of the physiology of the Sex Hormone offers one of the most promising fields in combined clinical and academic research. Out of the purely academic

work has evolved a reaction of such practical value as The Achheim-Zondech Test for Pregnancy, the work of Kohn and Chu in the immunization of Measles, Anterior-Poliomyelitis, Scarlet Fever and other eruptive diseases and the new preparations which are continually being obtained from the anterior lobe of the pituitary. The clinical possibility of these substances, in my opinion, are very great indeed, and it will be interesting to note their future developments.

## DISCUSSION

**George H. Ray,** Louisville: I wish to discuss a new phase of the treatment of hyperemesis gravidarum that I feel sure will revolutionize and simplify the treatment.

In the beginning I wish to say that this method can be handled just as well in the remote districts of our state as in modern hospitals.

I wish I had time to review some of the theories and facts for the causes of hyperemesis gravidarum, and you could easily see that our method is a logical treatment for all the known facts and most of the theories. We all agree that excessive vomiting will diminish the fluids and calcium of the body, and produce a slight or perhaps a marked degree of acidosis. I know of no better way of combating this malady than continuously supplying the body losses, in such a manner that it will equal body demand.

We have treated twenty-one cases by venoclysis after all other measures had failed. The rapidity of recovery in every case has been amazing and very gratifying. The treatment usually occupies a short period of two to four days, the average about three days.

We use a cannula devised by Dr. G. H. Hendon. I haven't time to give a detailed description of inserting the cannula, but it can be inserted in any extremity. The objection to a small scar on the arm can be overcome by inserting it in an inconspicuous place along the lower extremity or in the foot.

When all remedies have proven inadequate it is our policy to search for something new and better, and we have found venoclysis to be successful in all cases.

**J. T. Reddick,** Paducah: The essayist has given us an excellent paper, one well worth our study and consideration. He asked me to discuss it, a compliment I esteem.

The several controversial problems in obstetrics have been more to the front in the past few years in medical society work than perhaps ever before, and yet we have not reached a definite solution of these problems.

There are three outstanding questions yet to be solved and which have been extensively discussed; namely tuberculosis of the pregnant woman, of which I tried to speak this morning, the toxemia of pregnancy, and the vomiting of pregnancy, and perhaps there is a fourth question to be worked out, and that is, what part do the endocrine glands have to do relative to the pathological processes arising in pregnancy.

I believe the most prominent and unsolved question is that of hyperemesis gravidarum. I desire to congratulate Dr. Oldham on his attempted research work relative to placental blood. I say attempted because he says he was prevented from following it up and he has promised us further work along that line.

I desire to speak briefy on one phase of the paper, that part in which he speaks of the metabolic type of hyperemesis. He says that a considerable number of pregnant women exhibit a mild degree of hyperthyroidism as evidenced by increased metabolic rate, increased pulse rate, etc., and says Lugol's solution would be indicated. This is borne out by other writers, and work along that line has been done recently.

A paper was read before the Chicago Gynecological Society, January 16, 1931, by Frederick H. Falls, M. D., from the Department of Obstetrics and Gynecology, University of Illinois College of Medicine, and published in the December, 1931, issue of the American Journal of Obstetrics and Gynecology, on the use of Lugol's solution in hyperemesis gravidarum. He reported a number of cases treated with marked benefit, which was especially noticeable in cases showing hyperthyroidism.

The next logical step in the reduction of maternal mortality and morbidity is in the prevention of hyperemesis. Just as eclampsia has been largely eliminated by prenatal care and the intensive treatment of the pre-eclamptic state, so by the prompt treatment of the ordinary vomiting of pregnancy we ay be able to accomplish something.

Our modern methods of treatment have reduced the intractability of the disease. It is a disease caused by the maladjustment in many cases to the conditions instituted by pregnancy, and if we can stabilize the nervous system and supply water and nourishment until the woman's resources can be mobilized, we will cure many of our patients. We should be conservative in these cases, and conservatism is not inactivity. The conservative is the doctor who knows how and when to be radical.

A psychosis or a neuropsychosis lies often at the root of the disease.

I believe that the most dangerous form of the disease is the toxemic form, and most apt to die. In discussing hyperemesis some years ago, DeLee very aptly made this statement. He said that he was sincerely jealous of those men who had so many cases of hyperemesis without losing a mother or baby. He said, "I cannot do it and I have tried out consistently all the methods of treatment advocated so rosily by the numerous authors." In spite of everything, an occasional

woman will vomit and vomit. She will turn yellow, show albumin, diacetic acid, etc., in the urine, then suddenly she will turn blue, and unless her uterus is emptied within a few hours, she will die, and sometimes she will die anyway.

I would like to hear more about the treatment of this condition and would like to discuss the treatment, but time will not permit.

## POST-OPERATIVE PULMONARY AND CIRCULATORY COMPLICATIONS OF SPINAL ANESTHESIA AND ETHER*

Harry S. Frazier, M. D.
Louisville.

As early as 1909 Gwathemy had collected a large number of cases in which spinal anesthesia had been used and his opinion, which was corroborated by Janesco, Gray, Babcock and others, was that there was very much less danger of pulmonary complications occurring after a spinal than if an inhalation anesthesia was used. The feeling that a great hazard had been removed from surgery continued to gain ground and is, no doubt, responsible for much of the alacrity with which this procedure was adopted. It seemed to offer a particular factor of safety in the presence of pre-existing respiratory tract infections such as coryza, laryngitis, bronchitis, tuberculosis and the like. It was therefore, with some surprise that I recently discovered that one investigator had found pulmonary infections to be "4.29 times more frequent after spinal anesthesia than after one of gas-ether and oxygen." This statement aroused fresh interest in a subject that has always been of interest to me, and I have examined and tabulated three hundred cases each of spinal and inhalation anesthesia, the results of which I will present to you.

The fact that post-operative pulmonary complications occur after both types of anesthesia and continue to do so in uncomfortably large numbers is bound to be a matter of interest not only to the surgeon but to the medical profession in general. In years gone by this was accepted as an unpredictable and unpreventable danger due usually to the chemical irritation of the anesthetizing vapor acting upon some pre-existing respiratory tract infection. While this irritation probably does occur, the fact that we do have these complications with spinal anesthesia also, prove that there are other factors which must play important roles and their better understanding will be of inestimable value in the reduction of these complications.

### Physiology of Spinal Anesthesia

In Spinal anesthesia technique a solution of novacain, or novocain dissolved in spinal fluid is introduced into the spinal canal. The novacain diffuses through the spinal fluid and comes into contact with the roots of the spinal nerves which absorb the novacain, saturating these nerves for about 2 cm. beyond their exit, when the dura and arachnoid unite to form the neurilemma of the spinal nerves. Anesthesia resulting from block of the posterior or sensory roots is most marked because: (1) Sensory fibers are more susceptible than motor fibers, (2) the position of the sensory fibers favors more ready contact with the novacain. Besides its action upon the sensory fibers, novacain affects to a lesser degree the white rami communicantes, which form the connection between the spinal and sympathetic systems and here lies one cause of the fall in arterial tension with its resulting vascular instability. The sympathetic nerve fibers which emerge from the anterior thoracic and lumbar roots pass through the white rami communicantes and join the ganglia of the thoracic and abdominal sympathetic chain. The vaso-constrictor stimuli arise in the medullary and spinal centers and are carried to the nerves which supply the blood vessels by the way of the white rami and sympathetic ganglia. Failure of these stimuli to reach their destination, which may occur because of the anesthetic effect upon the white rami, results in dilatation of the blood vessels, with a consequent loss, to some extent, of the general vascular tone. Loss of this tone accompanies any intra-dural block and animal experimentation seems to have established the fact that the higher the block the greater is the drop in blood pressure, although there is but little reduction in cardiac output in dogs until the arterial blood pressure falls to 40 or 50 per cent of its original value. The heart usually remains relatively slow—clinically, a rapid heart is a danger signal and usually follows a diminished blood volume secondary to hemorrhage.

### Respiratory Paralysis

Immediate death from respiratory paralysis can conceivably occur in three ways: (1) Direct action on the medullary respiratory center by diffusion of novacain into the 4th ventricle. Johnston and Henderson and others found it almost impossible to cause death experimentally in this manner, except by using the most unreasonably high concentrations of novacain.

(2) Ascending block of intercostal and phrenic nerves. This disaster is said to be absolutely preventable and is due either to (a) ignorance or inexperience in the technique of the procedure, or (b) unsuccessful attempts to produce a selective sensory block of the neck and upper thoracic regions. This

*Read before the Medico-Chirurgical Society, Louisville.

type of paralysis occurs quite rapidly.

(3) Insufficient circulation through the central respiratory mechanism secondary to cardiovascular depression. Since the integrity of the respiratory center depends on the maintenance of an adequate volume of properly oxygenated blood, the obvious inference is that many cases of respiratory failure may be of this type. Seevers and Waters have shown experimentally that an adequate volume of well oxygenated blood is extremely difficult to maintain if nerve impulses are prevented from reaching a majority of the costal muscles by a high thoracic block.

These first two causes of respiratory paralyses (the diffusion of novacain into the ventricle and block of the phrenic and intercostal nerves) may be quickly disposed of as of rare occurrence with the present day knowledge and technique. The third cause which is dependent on circulatory collapse will be separately discussed together with the more recent methods of overcoming it.

### Survey of 300 Cases

Three hundred cases in which spinal anesthesia was used for major surgical procedures were examined. These cases were in no way selected but were taken as they came and those in which inhalation anesthesia were used were gotten in the same way. In examining these cases it became fairly obvious that spinal anesthesia was being most often used where there were existing conditions which could be presumed to somewhat increase the degree of surgical risk, such as hyper or hypotension, arterio-sclerosis, secondary anemias, etc. So in the evaluation of these figures, it must be remembered that many of the spinal cases were on patients of increased risk.

While only respiratory complications and those in which circulatory collapse occurred were listed, yet it was found that the occurrence of cystitis and thrombo-phlebitis in each series was the same 3 per cent and 1.5 per cent respectively.

Headache severe enough to cause mention upon the charts was present in only 10 per cent of the spinal anesthesia patients.

To summarize the two tables of data, there were in this series of 300, seventeen (5.66 per cent) respiratory complications where spinal was used; two with pharyngitis (.66 per cent), seven with bronchitis (2.33 per cent): three with atalectasis (1 per cent); three with pneumonia (1 per cent); two with pleurisy (.66 per cent), completing the total of seventeen, of which number, three died.

In the inhalation group there was one case of pharyngitis (.33 per cent); twelve with bronchitis (4 per cent); two with atalectasis (.66 per cent); two with pleuritis (.66 per cent); eight with pneumonia (2.66 per cent); two with pulmonary infarct (.66 per cent), making a total of twenty-seven cases (9 per cent) in this group, of which six died.

RESPIRATORY COMPLICATIONS

| SPINAL Diagnosis | Cases | % | | GAS-ETHER Cases | % |
|---|---|---|---|---|---|
| Pharyngitis | 2 | .66% | | 1 | .33% |
| Bronchitis | 7 | 2.33% | | 12 | 4.% |
| Atalectasis | 3 | 1.% | 2 died—found P. M. | 2 | .66% |
| Pneumonia | 3 | 1.% | | 8 | 2.66% |
| Pleuritis | 2 | .66% | | 2 | .66% |
| Pulmonary Infarct | | | | 2 | .66% |
| Total cases | 17 | 5.66% | | 27 | 9% |
| Total deaths | 3 | 1% | | 6 | 3% |

CIRCULATORY COLLAPSE

| SPINAL Cases | % | Deaths | GAS-ETHER Cases | % | Deaths |
|---|---|---|---|---|---|
| 7 | 2.33% | 6 | 4 | 1.33% | 4 |

TOTAL DEATHS

| | SPINAL Cases | % | | GAS-ETHER Cases | % |
|---|---|---|---|---|---|
| Respiratory | 3 | 1% | | 6 | 2% |
| Circulatory | 6 | 2% | | 4 | 1.33% |
| Other | 3 | 1% | | 3 | 1% |
| Total | 12 | 4% | Total | 13 | 4.33% |

ABDOMINAL VS. EXTRA-ABDOMINAL

| | Extra Abdominal | Abdominal |
|---|---|---|
| Number of Cases | 140 | 160 |
| Number of Pulmonary Comp. | 5 | 11 |
| Percentage | 3.5% | 6.8% |

GAS-ETHER

| | Extra Abdominal | Abdominal |
|---|---|---|
| Number of Cases | 92 | 218 |
| Number of Pulmonary Comp. | 4 | 23 |
| Percentage | 4.3% | 10.5% |

After considering these findings together with a review of the work recently published on this subject it seems that, in general, the abdominal (especially the upper abdominal) operation itself is one factor in the production of a large number of pulmonary complications.

It has been shown that upper abdominal operations produce—(1) marked reduction in the vital capacity of the lungs; (2) that respiration becomes more rapid and shallow and (3) that the total lung volume is decreased. In other words a state of hypo-ventilation ensues which probably permits the collection of secretions in the smaller bronchi or bronchioles so that atalectasis or pneumonia may follow. While there is sometimes an increased diaphragmatic activity in spinal block even this activity is of little benefit in maintaining efficient pulmonary ventilation because its excursion is hindered by the pressure of the abdominal viscera in the Trendel-

enburg position. Complications attributable to the operation and its anesthesia should develop during the first three or four post-operative days and be accompanied by fever, leukocytosis, cough and purulent sputum. Such cases in the past have been generally called broncho-pneumonia, later Whipple suggested the term pneumonitis but more recently careful post-mortem examination show that a great many of them have small areas of atalectasis and some massive collapse.

In inhalation types of anesthesia, it is, of course, possible to maintain a good ventilation during the course of anesthesia, but after its termination a condition ensues in which the same hypo-ventilation again obtains. The ether vapor , in the meantime, having caused a considerable amount of secretions throughout the bronchial tree.

According to the findings of Coryllos and Birnbaum the one final mechanism in the production of atalectasis is complete bronchial obstruction and absorption of the gases in the aveloli by circulating blood. Contributory factors are absence of cough, splinting of the chest, edema of the bronchial mucosa and viscid sputum. The mechanism of lobular or patchy atalectasis may likewise be considered dependent on complete occlusion of lobular bronchi.

Muller, Overholt and Pendergrass in a paper on post-operative pulmonary hypoventilation reported a high position of the diaphragm, and they suggest that the decrease of the bronchial air currents is conducive to a stagnation of bronchial secretions and consequent bronchial obstruction. These stagnated secretions often completely block a bronchiole or bronchus, often entrapping pathogenic bacteria. The air in the portions of the lung is soon absorbed, and an atalectasis is formed, its size depending on the size of the air passage thus occluded. The entrapped bacteria being undisturbed by further aeration are in an admirable position for growth and an actual pneumonic process can be initiated.

An effort was made in the examination of these charts of post-operative pulmonary complications to ascertain the number of cases in which there was previous history of recent respiratory tract infections. A previous or pre-existing cold or bronchitis is considered by Dochez and co-workers to be conducive to post-operative atalectases and pneumonias, as they demonstrated a tremendous increase in pneumonocci present in the pharyngeal and bronchial secretions of subjects after they had contracted a common cold. herefore the perfect picture for these complications is that a patient, harboring pathogenic bacteria incidentally or through the medium of a recent cold whose air passages contain a certain amount of muscus which any smoker or city dweller is almost bound to have,—this mucus or bronchial exudate may be increased by an inhalation anesthesia. Post-operative pains, splinting of the abdomen and chest, lying on the affected side and morphine, all inhibit the cough reflex,—which in most individuals operate once or twice daily in clearing the bronchial tree. With these conditions present it is very easy to conceive the plugging of some bronchi, and if this plugging persists an ensuing atalectasis and if pathogenic bacteria are confined in the atalectatic area a possible pneumonia.

### Treatment

Preventitive treatment has so far been in the direction of over coming the state of hypoventilation which the lung assumes following abdominal surgery. Henderson's recommendation of forced ventilation by inhalation of carbon-dioxide gas has thus far attracted most attention and most use. There have been very contradictory reports regarding any actual benefits from this procedure. Some have reported favorably and others most unfavorably, stating that enforced deeper respiration will (after ether anesthesia) but draw the bronchial secretions deeper into the smaller bronchioles and increase the number of complications.

Unfortunately nearly all of the statistics available thus far have had to do only with ether anesthesia and apparently the best controlled piece of work thus far published is King's who has found the number of complications definitely less in groups treated by carbon-dioxide inhalations and nearly as good in groups treated by postural drainage and frequent turning in bed. The treatment technique suggested by King was to give three inhalation treatments a day for the first three post-operative days requiring 5 to 10 minutes each time and beginning after the patient was back in bed and partly recovered from the anesthesia.

Carbon-dioxide inhalation appears useful only insofar as it encourages coughing and raises secretions.

Once the condition has developed, treatment depends upon the extent of involvement. Expectorants seem to be of some valne when their use is not precluded by nausea. Occasionally I have found ephedrin in full doses a material assistance especially when the auscultory findings are those of a diffuse bubbling bronchitis. Oxygen should be used as a matter of course at the first appearance of cyanosis.

### Circulatory Collapse

It was found that circulatory collapse occurred somewhat more often after spinal

anesthesia in this series (an incidence of 2 per cent spinal and 1.33 per cent ether). Other statistics bear this out to a certain degree. It may be that this collapse is nothing more than the ancient foreman "surgical shock" somewhat precipitated by the drop in arterial pressure by a spinal anesthesia. At any rate we are unable to distinguish between a state of "surgical shock" following trauma and hemorrhage; operations under inhalation anesthesia; and operations under spinal. In each instance we have a collapsed individual, restless and anxious if conscious, ice cold extremities, general clammy sweating and weak rapid pulse and heart beat. However much these conditions may be similar the circulatory collapse after spinal anesthesia appears to be much more stubborn in response to treatment. Kremer and Wright have duplicated this condition in animals by doing a bilateral section of the splanchic nerves. They observed a 15 per cent drop in blood pressure, little or no change in venous pressure although the vascular bed in the spleen and intestine was markedly enlarged, the intestines were pale and contracted, the uterus blanched. In traumatic and hemorrhagic shock there is a capillary vasodilation with passage of fluid through the capillary walls into the surrouding tissue. This fluid in composition resembles blood plasma and usually contains no red blood corpuscles, so there is evidently some change in the premeability of the capillary structure.

However observations imply that the origin of shock in spinal anesthesia is entirely neurogenic. When the vaso constrictor stimuli fail to reach their destination because of anesthetic effect upon the white rami there occurs the loss of skeletal muscle tone which is so necessary in maintaining a stable capillary and venous bed.

Assuming that this circulatory failure is general and is as grave in the pulmonary circulation as anywhere else, and that inadequate oxygenation soon results (with a corresponding increase in $CO_2$). Seevers and Wright propose treating this collapse following spinal by inhalations of oxygen which they assert has a good tonic effect upon the entire organism.

Ephedrin is at present enjoying a wide usage as a prophylactic measure either pre or post spinal and again at blood pressure maintaining intervals after the operation. Ephedrin increases the peripheral resistance by its vaso-constrictor effect upon the arterioles and probably increases the volume output of the heart, by direct action on the cardiac muscle. Adrenalin though quicker and similar in effect is so short lived in its action as to be of little value.

Other drugs commonly used are caffeine sodium benzoate, digitalis, strychnia and others depending on the indications at the time. None of these has any specific virtue in over coming such conditions but with a desperately ill patient, one is inclined to use anything that offers any assistance.

The administration of glucose or saline, or both, either intravenously or under the skin is usually of value and should not be neglected. In the same way a blood transfusion is frequently resorted to.

| | TOTAL DEATHS | | | |
|---|---|---|---|---|
| | SPINAL | | GAS-ETHER | |
| | Cases | % | Cases | % |
| Respiratory | 3 | 1% | 6 | 2% |
| Circulatory | 6 | 2% | 4 | 1.33% |
| Other | 3 | 1% | 3 | 1% |
| Total | 12 | 4% | Total 13 | 4.33% |

CONCLUSIONS

(1) It was found in a study of 300 cases, each, of spinal and inhalation anesthesia that post-operative complications occurred more often after the latter. (Spinal 5.66 per cent-Ether 9 per cent).

(2) A termination designated as circulatory collapse occurred more often after spinal anesthesia. (Spinal 2.33 per cent-Ether 1.33 per cent).

(3) The principal cause of respiratory complications appears to be impaired ventilation of the lungs, which follow all abdominal operations particularly upper abdominal operations. Additional causes are accumulation of bronchial secretions and inhibiting of cough.

(4) The pathology is probably most often atalectasis though this diagnosis can scarcely be made clinically and with difficulty by the x-ray man.

(5) Spinal anesthesia invariably causes a drop in vascular pressure which is ordinarily controlled by the use of Ephedrin. Frequent post-operative blood pressure observations might be wise after spinal anesthesia.

(6) Pulmonary complications prophylaxis is being sought for by the practice of post-operative hyper-ventilation which may prove of value. Otherwise frequent changes of position offers the only means of encouraging ventilation of the lungs.

## DISCUSSION

**J. Rowan Morrison:** All anesthetics are more or less dangerous. Considering the number of cases Dr. Frazier has collected the mortality is comparatively low. As cases come and go in hospitals, I think many patients are operated upon too soon. They are anxious to get home or their money is running low, and they do not want to wait until they get over a bronchial infection, for instance.

Another thing that must be considered in col-

lecting statistics such as Dr. Frazier has given us, is that patients who present themselves for gall bladder operations have previously had heart trouble, or a stroke of paralysis, or something of that kind. I do not believe such patients should be operated upon. A sedative of some kind would be a better procedure, yet I have seen surgeons take out the gallbladder in such cases and four or five days later the patient dies, not from the operation but from pneumonia following it, or other pulmonary complications, heart failure, etc.

From my own observation and from what Dr. Frazier has said, spinal anesthesia is not without danger and I believe a good many Eastern surgeons have reached the same conclusion. I am glad Dr. Frazier brought up the question of hyper-ventilation of the lungs after operation. It is something about which we still have a great deal to learn.

**Morris Flexner:** In May, 1932, I was present at the New Orleans meeting of the A. M. A., and I recall Dr. Judd's discussion of a symposium on anesthesia. They had been very enthusiastic about spinal anesthesia at the Mayo clinic until they had several deaths they could not explain. Dr. Judd described in detail two gallbladder cases, both in women, who had done beautifully at operation and came out in very good shape. The next day the blood pressure went to zero, but under stimulation came back to normal. The next day it went to zero again and this time it did not come back. They still use spinal anesthesia in the Mayo clinic but their enthusiasm for it has dwindled somewhat.

As to Dr. Frazier's statistics, taking all the various types of cases that come into the hospital and giving one spinal and the next ether, it is questionable whether the conclusions drawn have any real value. If you take a hundred cases of hyperthyroidism, for instance, and give half of them ether and the other half spinal, you can get a fair idea of the effects of the anesthetic, but in an assorted group of cases such as Dr. Frazier has collected, and conclusions drawn, while interesting, are somewhat risky.

Of all anesthesias, the one that impresses me most favorably is ethylene. It may not produce quite enough relaxation at times, but it does give a beautiful anesthesia.

As to hyperventilation after gas and ether anesthesia, I believe this is a valuable addition to the anesthetic field. It cannot hurt the patient. As to the possibility of deep breathing drawing infection into the lungs, I think that is rather far-fetched.

**Wallace Frank:** Dr. Flexner brought out one point I would like to emphasize: namely, that in drawing conclusions, especially concerning complications following anesthesia, the statistics should be compiled from cases of the same or similar character. For example, about two years ago I went over all the cases of lung abscess recorded at the City Hospital, and found that quite a number of these cases had developed following operations, some of which were done under local anesthesia, some under spinal and some under ether. They were all primarily septic; none was a clean case. In collecting statistics of this character, only cases of the same type should be compared as, for example, 100 cases of acute appendices, half of which were given ether and the other half spinal. In a comparison of the results of anesthesia embracing any and all operations below the diaphragm, and conclusions drawn, while interesting, must be considered open to question.

I am surprised that the essayist did not mention lung abscess as a complication. In a collection of some six hundred cases it is rather surprising not to have had one or two cases of lung abscess.

**Guy P. Grigsby:** It had been my impression, gathered from hearsay and personal observation, that the percentage of mortality from spinal anesthesia is generally higher than from inhalation anesthesia, but this was apparently not true in Dr. Frazier's series of six hundred cases. He stressed the point also that spinal anesthesia is used in many more or less desperate cases where inhalation anesthesia could not be used.

Spinal anesthesia has much to commend it, especially in upper abdominal surgery. In gall bladder operations, for example, the trauma incident to ether anesthesia in which complete relaxation has not been obtained, packing with sponges, etc., necessarily cuts down the aeration of the lungs, and lung complications would be more apt to develop than under spinal anesthesia.

Like the other speakers, I think there are many factors to be considered in collecting statistics concerning complications following spinal and inhalation anesthesias, and any conclusions drawn must be arrived at with due consideration for all the factors involved.

**A. J. Miller:** I think we have very little foundation for the idea that pneumonia must be preceded by atelectasis, or even that the atelectic lung is to a great degree more susceptible to infection than one that is aerated. I say that because it is very infrequently demonstrated that pneumonia is apparently preceded by atelectic tissue in the lung, or that we find atelectasis in postmortems on individuals dying shortly after operations of various kinds. I mean to say this—that if the bronchi and air-sacs themselves are filled with secretions or serous exudates, infection is very apt to follow. Perhaps the reason for that is that the circulation is not as much impeded in the atelectic lung as it is in one that is filled with material. For

example, an air-sac that is filled with fluid or solid material is more rigid. With an air-sac that is partially or almost completely collapsed (they never absolutely collapse) there is still that massaging motion which aids circulation. It is probably true that anoxaemia lowers the patient's resistance. If we lessen the supply of oxygen to the tissues they are naturally more susceptible to infection than if the supply of oxygen is good. The supply of oxygen in an atelectic lung is probably better because the circulation is better than in one made rigid by being filled with secretion, whether that secretion be there primarily, or for some other reason such as decompensation in heart disease, and so on. There is considerable experimental work that could be done that would help to clear it up. It would not be a very difficult matter to expose the various tissues of the body, or even the skin, to ether and chloroform for instance, or to the gases that are used in inhalation anesthesias, and experiment with strains of pure micro-organisms to determine whether ether and other anesthetic agents would really lower the resistance of the tissues. Such experimentation would materially crystallize our notions about this question. There is such a thing as local immunity and local resistance and they apply to most infections.

**Louis Frank:** I want to express my appreciation to the essayist for his interesting paper but, as has been expressed by the other speakers, it is very difficult to draw definite conclusions from a group of cases such as he has collected. Conclusions of more value might be derived from them if they were classified according to the type of operations, and with respect to the region of the body operated upon.

The question of hyperventilation is a very interesting one and I am inclined to believe this condition occurs more frequently than is generally supposed. As we look over this chart, it contains only two cases of pulmonary infarct and yet there are four cases of pleurisy. My estimation, from what I have seen on the autopsy table, would be that these cases of pleurisy, unless there was definite effusion, were probably also infarcts, and that is an important thing to bear in mind. My own belief is that infarcts occur much more frequently than we suspect.

With the work done by Graham in mind, the thought occurs to me that perhaps many of these lung complications are various stages of the same thing. Graham has shown definitely in bronchial fistula, that we cannot have a disturbance of the upper respiratory tract without the bronchi themselves manifesting the same changes as are taking place above. This has been invariably true in his observation.

With respect to spinal versus inhalation anesthesia, here again we cannot draw any definite conclusions unless we compare operations in the same region of the body. There is a tremendous difference between a hernia operation under spinal anesthesia and a gall bladder operation under spinal anesthesia. There is a difference in the diffusion and in the ultimate result of the anesthesia. We have not heard the last word on spinal anesthesia and when we finally come to evaluate its risk I believe we will reach the same conclusion that we did in former years regarding chloroform anesthesia that it is a much more dangerous anesthetic than we now believe on account of delayed effects. We do not yet know what are the remote effects of spinal anesthesia upon the cord and membrane or upon the heart and nervous system.

Regarding circulatory collapse in spinal anesthesia, I think it has been definitely shown that if anything is to be used to prevent this complication, it must be given before the spinal anesthetic is administered. It is too late after the circulation has collapsed to give ephedrin and other agents. In order to be of any value they must be given an appreciable time before the anesthetic is administered.

In two instances following hernia operations under spinal, we have seen an adynamic paralysis of the entire intestinal tract. This is a possibility that should not be overlooked. We believed it to be the result of the spinal anesthesia and such it proved to be.

As to the choice of anesthesia, I think the anesthetic should be made to suit the patient; under no circumstances should the patient be adapted to the anesthetic. Especially is this true in individuals over forty, most of whom require special care before undergoing any operation. It is a difficult thing to accurately evaluate the patient's resistance, the exact burden his heart will bear, etc., entirely from laboratory findings. I have seen patients laboratory tested and marked 100 per cent, and yet when we began to work on them they would begin to fade out of the picture almost at once. We are too prone to rely upon laboratory findings and to neglect those things which we as clinicians should be able to elicit if we give the patient the benefit of our best effort.

Ether and gas anesthesias are not without danger. We have in recent months followed all of our anesthesias by washing out the lungs with carbon-dioxide. I believe this should be done in all cases of gas-ether anesthesia, because we do have the question of subventilation to consider and this is perhaps the best way to meet it.

From my personal observation the best of all anesthesias is one which has more or less undeservedly come to be associated, in the minds of the profession as well as the laity, with an undue amount of extrinsic hazard. I refer to ethylene gas. I would not be construed as saying that there is no danger from explosion in

the use of ethylene, but I do believe this danger has been very much exaggerated and over-estimated. I have heard some of our outstanding anesthetists discuss this form of anesthesia in a way that would lead to the belief that a great number of fatalities had occurred as a result of ethylene explosions. As a matter of fact, this is not true. As far as I know there have been not more than two or three deaths from ethylene explosions in this country. These explosions may also result from the effect of static sparks upon oxygen tanks even without ethylene. In many clinics the cautery is used along with ethylene anesthesia and there have been no explosions. With any form of anesthesia where oxygen is used, the tables, etc., should be grounded to obviate the danger from static electric sparks. With these precautions and the right type of anesthesia apparatus the danger of explosion is not unduly great. As far as the patient is concerned, it is the safest form of anesthesia at our command. It can be safely given to tuberculous individuals and to individuals where it is not desirable to use spinal anesthesia.

**Emmet F. Horine:** Dr. Frazier has apparently found that spinal anesthesia is more frequently accompanied by circulatory complications than inhalation anesthesia. The usual and, at times, the alarming fall in blood pressure which accompanies spinal anesthesia offers an explanation for the circulatory collapse met with.

Spinal anesthesia is frequently selected in hypertensive states on the theory that if high blood pressure is primarily present there is less danger from a fall. This is extremely faulty reasoning. The constant accompaniment of an essential hypertension is a generalized arteriolor-sclerosis. In fact, the arteriolor change probably precedes and is responsible for the elevation of the blood pressure. Thus in order to prevent cerebral anemia, which would result from the decreased blood supply through narrowed arterioles the pressure is elevated. Since cerebral anemia is apparently the cause of death in spinal anesthesia it does not seem logical to court this disaster by employing a method which would produce a reduction in blood pressure thus destroying a protective mechanism in hypertensive individuals.

In my opinion the safest of all anesthetics in cases where it can be used is local anesthesia. May I call attention to the postulates of Schleich enunciated many years ago. These postulates are of especial significance when dealing with patients having heart disease:

1. A general anesthetic is to be used in operative conditions in which the danger to life by not operating is greater than the risk assumed by the use of the anesthetic agent.

2. A general anesthetic is to be employed only, when in no other way, the relief of pain at operation can be secured.

3. With every general anesthesia which is unavoidable the case should be handled as one of the few for whom the anesthetic was especially dangerous.

Generally speaking the safest anesthesia is local, the next some type of inhalation anesthesia and undoubtedly the most dangerous is spinal. These statements certainly hold true with reference to heart disease and, in fact, largely with reference to normal persons requiring anesthesia.

**J. Garland Sherrill:** I think Dr. Frazier has done a very notable piece of work in compiling the figures he has presented and that they have a definite value. Take the general run of all types of cases that come into the City Hospital day by day, and in the long run the law of averages will govern here as elsewhere, and this applies to Dr. Frazier's statistics. If greater detail and more strict comparison is desired, it will be necessary to separate these cases into classified groups.

I believe we all agree that every form of anesthesia is more or less dangerous. It has been shown by Phelps, a New York surgeon, that the minimum dose of cocaine that will cause death is 3-5 gr. In giving our spinal anesthesias we should keep this in mind and keep the amount of the drug administered below that minimum.

I agree with Dr. Horine that, in cases where it can be used local anesthesia is perhaps the safest of all. The anesthetic must be fitted to the patient and not the patient to the anesthetic.

As to aeration of the lungs, I learned a long time ago that my patients did better propped up in bed as soon as possible after operation. I never turn a patient "down hill" after a spinal anesthesia, and during the operation the patient does better if the head is kept up.

**Joseph M. Frehling:** The last speaker is at a decided disadvantage because nearly everything has been said. However, there are few points I would like to emphasize.

Sometime ago there was published in the Annals of Surgery an article by Arnheim, who is associated with Dr. Berg at Mt. Sinai Hospital, in which he reviewed 497 spinal anesthesia cases. I recall that at one time Berg became very much embarrassed by what he considered the high percentage of pulmonary complications following gastrectomies, which finally reached the figure of 5 percent, whereupon he determined to use spinal anesthesia routinely in his gastric work. I believe if the average doctor were asked to state the chief advantage of spinal anesthesia, he would undoubtedly answer—"The absence of postoperative pulmonary complications." Yet the result of Arnheim's investigation of 497 cases of spinal anesthesia showed that postoperative pulmonary complications occurred in 27, or 4½%, consisting of 21 cases of pneumonia (proved by

X-rays or postmortem), 3 cases of pulmonary embolism and 2 cases of infarct. In so large a series of cases the results are rather conclusive and appear to demonstrate that the percentage of pulmonary complications following spinal anesthesia is very little if any lower than following inhalation anesthesia. So, the results of Dr. Frazier's observations are borne out by Arnheim's conclusions.

As to the question of circulatory collapse, I agree with Dr. Horine that hypertension is a contraindication and probably the only contraindication to the use of spinal anesthesia. Suppression of urine, haemiplegia and embolism in such cases are the direct result of the lowering of the blood pressure, thus defeating Nature's effort to take care of an individual with a diseased kidney, for instance, by creating a hypertension in an attempt to push blood through the kidney. The same thing is true in connection with the formation of emboli.

I disagree with Dr. Frazier in one particular. He mentioned the resemblance between spinal anesthesia shock and surgical shock and said they are difficult to differentiate. There is one decided difference, and that is in the pulse rate. During spinal anesthesia shock the patient does not have a rapid pulse; regardless of the drop in blood pressure the pulse remains slow, and as long as it does remain slow the drop in blood pressure need not be a source of worry to the surgeon or the anesthetist. When the pulse becomes rapid it is really a case of surgical shock and must be regarded as such. Our means of combatting it are few. It is just as useless to inject ephedrin or any other agent into a patient suffering from spinal anesthesia shock as it would be to apply a dynamo to the proximal end of a wire that has been cut and expect the current to be manifested at the distal end. An exactly parallel situation exists in spinal anesthesia.

I recently had an opportunity to observe Dr. Straus' work in Chicago. He has adopted the routine procedure of giving all his patients, especially stomach cases (in which he feels that pulmonary complications are most frequently encountered) carbon-dioxide every two hours for 48 hours after operation. He has not been doing this long enough to be able to say accurately what the results will be, but his impression is that the number of pulmonary complications has been reduced.

**H. A. Frazier,** (in closing): I very much appreciate the discussion which I had been counting on to round out the paper, because I realized its short-comings.

It is, of course, obvious that the incidence of pulmonary complications following spinal anesthesia will vary, just as the incidence of common colds and general respiratory affections will vary. We have seasonal variations and variations in severity. In some seasons we will lose nearly all of our lobar pneumonia cases and in other seasons we will save nearly all of them.

I fully realize that observations based on a series of cases of the same type might be of more value, but there are certain equalizing factors in the cases compiled which must be taken into consideration. There were no goiter cases in this series. In the gas-ether group I felt that the number of breast cases probably balanced the perineorraphies. In the spinal anesthesia group there were no operations above the diaphragm.

I particularly appreciated Dr. Miller's remarks concerning atelectasis. I think his views are in line with those of other current writers, that it is questionable how much atelectasis has to do with the development of pneumonia and other infections. I do not doubt that many cases diagnosed as pneumonias and pleurisys are really infarcts.

All in all I think the discussion has served to bring out the weak points in the paper and that it has been a worth-while subject.

## BOOK REVIEWS

THE PREGNANT WOMAN—By Porter Brown, M. D. 192 pages, illustrated, $2.00. Published December 10th, 1933. Eugenics Publishing Company.

Since his matriculation 23 years ago, Dr. Brown has specialized in Obstetrics and Gynaecology, except for the period when he served as a surgeon in the U. S. Army Medical Corps. He has studied at leading clinics in the United States and in Europe. He is a member of the American Medical Association, the Kansas Medical Society, and the Saline County Society. He is now engaged in active practice in Salina, Kansas.

In this volume the author combines the broad, practical experience of the old-fashioned "Country Doctor" with the thorough technical training of the modern specialist. His book, "The Pregnant Woman" was written as the result of the needs disclosed to him by the thousands of women whom he attended in the great experience of motherhood. In our opinion there is no book now available that offers the sane, sensible advice and comfort imparted by Dr. Brown.

He tells women to rid themselves of the foolish, ignorant, and frequently dangerous superstitions concerning pregnancy. The Table of Contents sufficiently discloses how Dr. Brown enlightens women about all the events which may be expected from impregnation up to the first few weks after birth. An especially important chapter is that in which Dr. Brown tells women how modern medicine makes childbirth practically painless.

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NEXT MEETING HARLAN, OCTOBER 1-4, 1934


## COUNTY SOCIETY REPORTS

**Knox:** The Knox County Medical Society met January 8th at 6 p. m. in the private dining room of the Black Stone Hotel in Barbourville, with the following members present: Ewd. Parker, Geo. Corum, M. A. Bizzell, B. P. Jones, Leslie Logan, J. S. Lock, J. G. Tye, Allan Tuggle, T. R. Davis, F. R. Burton, and S. H. Rowland of Cawood in Harlan County, as a visitor. This was a called meeting for the purpose of electing officers for 1934 and other local purposes.

Ewd. Parker, of Gray, President, re-elected; M. A. Bizzell, Vice-President, reelected; F. R. Burton, Secretary-Treasurer.

After our business was transacted, we had a report of cases and a general round table discussion.

S. H. Rowland reported a very unusual case of scarlet fever.

Every member present paid his dues for 1934. After which we adjourned to meet on our regular meeting time, when we will again have a general discussion of cases reported, instead of a set program.

F. R. BURTON, Secretary.

**Jefferson:** The following is the March program of the Jefferson County Medical Society:

**March 5th**

**Symposium on The Common Infections**

The Eye, C. Dwight Townes, M. D.
- Care during attack
- Complications
- Permanent disabilities.

The Ear, Will R. Pryor, M. D.
- Prevention and treatment of complications

The Nose, Auryne E. Bell, M. D.
- Complications
- Carriers.

The Throat, Karl N. Victor, M. D.
- Diagnosis
- Complications
- Carriers.

Discussion to be opened by Walter F. Boggess, M. D. and Lee Palmer, M. D.

**March 19th**

Program under the auspices of the Louisville Obstetrical and Gynecological Society. Speaker and title to be announced.

CHARLES M. EDELEN, Secretary,
WALTER HUME, President.

**Pike:** The Pike County Medical Society held their regular meeting January 4, 1934, and elected the following officers: L. E. Cox, Stone, President; M. D. Flanary, Pikeville, Secretary.

M. D. FLANARY, Secretary

## NEWS ITEM

Dr. J. D. Allen has discontinued his associations with the Allen-Sandlin Laboratories, Inc., and the Allen-Sandlin School of Laboratory Technique, Inc., but will continue his associations with the Louisville Research Laboratory.

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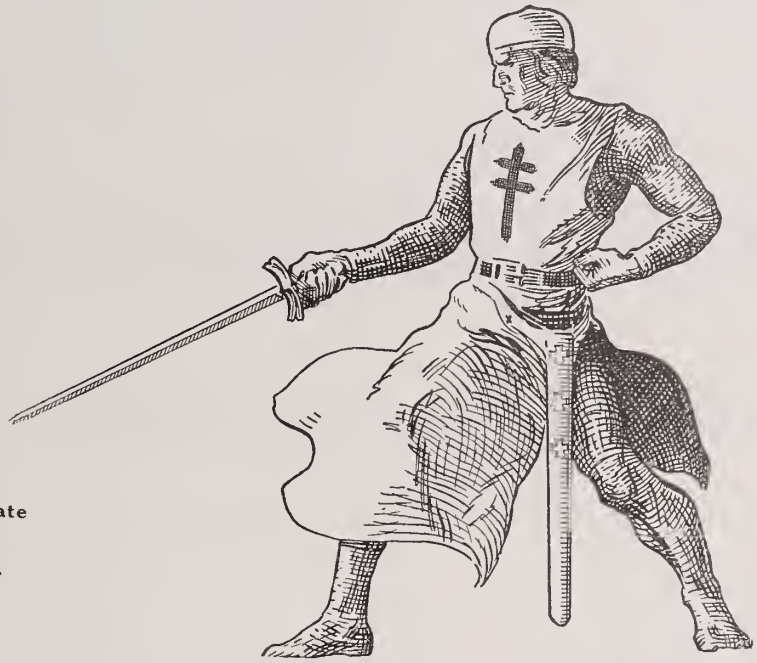
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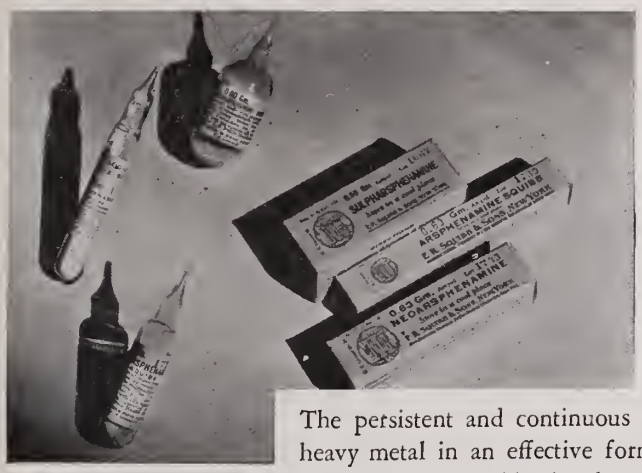
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"As to the kind of extra carbohydrate to be added, whether lactose or maltose, I believe dextri-maltose to be better in general in cases of fat indigestion (infantile atrophy)."—*C. H. Dunn: The Hygienic and Medical Treotment of Children, Southworth Co., Troy, New York, 1917, V. 1, p. 418.*

In the treatment of decomposition, "The period of repair may be shortened by giving suitable additional food; the best, probably, being buttermilk to which carefully regulated proportions of dextrin and maltose preparations or malt soup are added."—*E. Feer: Text-Book of Pediatrics, J. B. Lippincott Co., Phila., 1922, p. 284.*

In infantile atrophy, "The carbohydrate should be increased by gradual addition of dextrimaltose.

"Malt soup or dextrimaltose (Mead's) sbould be added in teaspoonful or more doses to each feeding until the point of carbohydrate tolerance is reached."—*L. Fischer: Diseoses of Infancy and Childhood, F. A. Davis Co., Phila., 1925, V. 1, p. 285.*

In tbe case of a premature infant, "Dried milk witb water was given, which later was changed to whole milk, 14 ounces; water, seven ounces, and dextri-maltose No. 1, one and one-half ounces. Seven feedings of three ounces each every three hours was given. The above feeding was retained. The infant gained eight ounces at the end of the first week."—*L. Fischer: Clinical notes in a series of premature infants, Arch. Pediat. 44:227-231, April, 1927.*

In the treatment of decomposition, "As a rule it is best to start with 2 to 2½ or 3 ounces of albumin milk to the pound weight in 24 hours; the sugar to be added is in the form of a maltose-dextrin mixture. One should never delay too long in adding this."—*C. G. Grulee: Infont Feeding, W. B. Saunders Co., Philo., 1922, p. 265.*

With reference to hypotrophy, "In mild cases, the addition of dextrimaltose instead of cane or milk sugar may be sufficient to obtain a gain in weight."—*C. Herrman: The treatment of nutritionol disorders in artificially-fed infants, New York M. J. 114:158-160, August, 1921.*

In athrepsia, "The carbohydrates are usually added in a slowly fermentable form, such as the maltose and dextrin compounds, which are usually started by the addition of four grams per kilogram (1/15 ounce per pound) aud increased until eight grams or more per kilogram (¼ ounce per pound) of body weight are added."—*J. H. Hess: Feeding ond the Nutritionol Disorders in Infancy ond Childhood, F. A. Dovis Co., Phila., 1928, p. 278.*

Concerning the treatment of marasmus, "When the stools have become smooth and salve-like, carbohydrate, in the form of dextrimaltose, may be gradually added up to the limit of tolerance."—*L. W. Hill: Practical Infant Feeding, W. B. Saunders Co., Phila., 1922, p. 281.*

In the feeding of prematures, "As soon as there is a hesitation in the gain in weight, dextrimaltose No. 1 is substituted for the dextrose, in the same amount in the mixture, with almost invariably a gain in weight."—*F. B. Jacobs: Relation of irradiated food substances and ergosterol versus cod liver oil in childhood nutrition, Pennsylvania M. J. 35:164-167, Dec., 1931.*

"A spasmophilic baby on bottle feeding should receive a limited amount of milk—a pint, or at the most 24 ounces in the 24 hours—to which cereal gruel and some form of sugar is added, preferably one of the malt dextrin preparations, also the early addition of other foods than milk to the baby's diet."—*M. Jampolis: Infantile spasmophilia, Interstate M. J. 25:652, Sept., 1918; abst. Arch. Pediat. 35:691, Nov., 1918.*

In cases of malnutrition and indigestion, "The appetite improves rapidly, and the stools soon become normal in appearance, if the sugars are intelligently prescribed. By this I refer to proper proportions of dextrin and maltose. When there is a tendeney to looseness, I have used the preparation known as 'dextri-maltose,' for the extra carbohydrates; . . ."—*M. Lodd: Further experience with homogenized olive oil mixtures, Arch. Pediot., 33:501-512, July, 1916.*

In pyloric stenosis, "With low dextrose tolerance, a maltose dextrin preparation may be added in whole or in part. Even where the dextrose is well tolerated and gain in weight has ceased, impetus to the weight ontake may be given by the addition of a maltose dextrin preparation."—*D. J. Levy: Pyloric stenosis and pylorospasm of infancy with especiol reference to medicol treotment, J. Michigon St. M. S., 21:166-170, April, 1922.*

With reference to the treatment of diarrhea, "After several days, 2% to 3% of a maltose-dextrin preparation may be added (Dextri-Maltose). This is preferable to the easily fermentable lactose or cane sugar."—*F. Lust: The Treotment of Children's Diseases, J. B. Lippincott Co., Phila., 1930, p. 145.*

In dyspepsia, "The carbohydrate must not be allowed to exceed 3 per cent. Dextri-maltose is the most suitable sugar."

In tbe treatment of decomposition, atrophy, malnutrition, marasmus), ". . . when there has been obvious improvement, dextri-maltose is gradually increased from 3 to 5 per cent."—*B. Myers: The nutritional disturbances of infoncy, Brit. M. J., 1:1079-1083, June 21, 1924.*

"The treatment of artificially fed children in the first of these groups consists in putting them on a low fat dietary, and giving them carbohydrate in the form of one of the less fermentable sugars—e.g., dextrimaltose."—*L. G. Porsons: Wasting disorders of early infancy, Lancet, 1:687-694, April 5, 1924.*

In the milder cases of manition, "Regulation of this disturbed organismal balance is obtained by the addition of carbohydrates, while fat and casein are reduced. For this purpose dextrimaltose and flour are better than the ordinary sugars, since they are more slowly absorbed and have greater efficacy in their powers of controlling the flora in the large intestine."—*W. J. Pearson and W. G. Wyllie: Recent Advances in Diseases of Children, P. Blakiston's Son & Co., Phila., 1930, p. 116.*

In intestinal intoxication, "I have had more experience with dried skimmed milk in which 2 to 5 per cent dextrimaltose, barley or sice flour has been cooked, and the mixture subsequently fermented by lactic acid bacilli or soured with lactic acid, than with any other food except protein milk."—*G. F. Powers: A comprehcnsive plan of treotment for the so-called intcstinol intoxicotion of infonts, Am. J. Dis. Child., 32:232-257, August, 1926.*

Regarding the treatment of the marantic infant, "After the intolerance to sugar has been overcome a carbohydrate, preferably Dextri-maltose, may be added."—*C. S. Raue: Diseases of Children, Bocricke & Tafel, Phila., 1922, p. 427.*

In spasmophilia, "Dextri maltose is the best sugar to use in these cases, in the proportion of 6 to 8 per cent."—*J. H. Reoding, Jr.: Spasmophilia, Hahneman. Monthly, pp. 403-411, July, 1922.*

In the treatment of atrophy, "If the baby continues to improve, the next step in the treatment is to add to the milk one of the less fermentable carbohydrates, such as dextrimaltose; . . ."—*H. Thursfield and D. Paterson: Diseases of Children, William Wood & Co., 1929, p. 105.*

"I also find dextrin-maltose an exeellent addition to albumin-milk when the first object of that food has been achieved and a gain in weight is desired, in this way I have succeeded in feeding albumin-milk far beyond the period usually advised, with highly gratifying results."—*F. L. Wachenheim: Infant-Feeding; Its Principles and Practice, Lea & Febiger, Phila., 1915, p. 158.*

"Dextri-maltose has been substituted for lactose not infrequently, when the toleranee for the latter continues low."—*L. H. West: Low fat, high starch evaporated milk feeding for the marasmic baby, Arch. Pediat. 48:189-193, March, 1931.*

"Malt sugar is indicated when others fail to produce a sufficient gain, or when malassimilation of fat is evident."—*O. H. Wilson: The role of carbohydrates in infant feeding, Southern M. J. 11:177, March, 1918; abst. Arch. Pediat. 35:447, July, 1918.*

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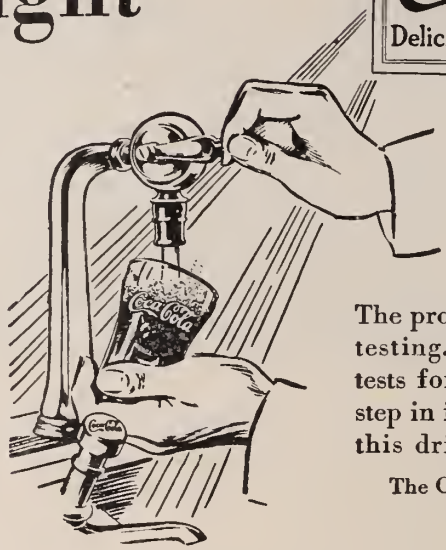
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## CALENDAR OF COUNTY SOCIETY MEETINGS

| COUNTY | SECRETARY | RESIDENCE | DATE 1934 |
|---|---|---|---|
| Adair | W. J. Flowers | Columbia | April 4 |
| Allen | A. O. Miller | Petroleum | April 28 |
| Anderson | J. B. Lyen | Lawrenceburg | April 2 |
| Ballard | F. H. Russell | Wickliffe | April — |
| Barren | Paul S. York | Glasgow | April 18 |
| Bath | H. S. Gilmore | Owingsville | April 9 |
| Bell | O. P. Nuckols | Pineville | April 13 |
| Boone | R. E. Ryle | Walton | April 18 |
| Bourbon | W. B. Hopkins | Paris | April 19 |
| Boyd | R. G. Culley | Ashland | April 3 |
| Boyle | P. C. Sanders | Danville | April 10 |
| Bracken | J. M. Stevenson | Brooksville | April 2 |
| Breathitt | O. M. Goodloe | Jackson | April 17 |
| Breckinridge | J. E. Kincheloe | Hardinsburg | April — |
| Bullitt | S. H. Ridgeway | Shepherdsville | April — |
| Butler | G. E. Embry | Morgantown | April 4 |
| Caldwell | W. L. Cash | Princeton | April 3 |
| Calloway | W. H. Graves | Murray | April 11 |
| Campbell-Kenton | Luther Bach | Bellevue | April 5-19 |
| Carlisle | G. W. Payne | Bardwell | April 3 |
| Carroll | J. M. Ryan | Carrollton | April 10 |
| Carter | R. G. Townsend | Grayson | April 10 |
| Casey | Wm. J. Sweeney | Liberty | April 26 |
| Christian | M. A. Gilmore | Hopkinsville | April 17 |
| Clark | R. H. Scobee | Winchester | April 20 |
| Clay | J. L. Anderson | Manchester | April 10 |
| Clinton | S. F. Stephenson | Albany | April 21 |
| Crittendon | C. G. Moreland | Marion | April 9 |
| Cumberland | W. F. Owsley | Burkesville | April 4 |
| Daviess | J. A. Thorpe | Owensboro | April 10-24 |
| Elliott | | | April — |
| Estill | Walter Cox | Irvine | April 11 |
| Fayette | John Harvey | Lexington | April 10 |
| Fleming | J. B. O'Bannon | Flemingsburg | April 11 |
| Floyd | E. E. Martin | Allen | April 13 |
| Franklin | W. S. Snyder, Jr. | Frankfort | April 5 |
| Fulton | Glynn F. Bushart | Fulton | April 11 |
| Gallatin | J. M. Stallard | Sparta | April 19 |
| Garrard | B. Earl Caywood | Lancaster | April 19 |
| Grant | C. A. Eckler | Dry Ridge | April 18 |
| Graves | H. H. Hunt | Mayfield | April 3 |
| Grayson | R. F. Porter | Leitchfield | April 26 |
| Green | S. J. Simmons | Greensburg | April 2 |
| Greenup | Carl M. Gambill | Greenup | April 13 |
| Hancock | F. M. Griffin | Hawesville | April 2 |
| Hardin | D. E. McClure | Elizabethtown | April 12 |
| Harlan | Clark Bailey | Harlan | April 28 |
| Harrison | W. B. Moore | Cynthiana | April 2 |
| Hart | S. F. Richardson | Munfordville | April 3 |
| Henderson | Walter O'Nan | Henderson | April 9-23 |
| Henry | Owen Carroll | New Castle | April 30 |
| Hickman | Chas. Hunt | Clinton | April 5 |
| Hopkins | David L. Salman | Madisonville | April 5 |
| Jackson | | | April 7 |
| Jefferson | Chas. M. Edelen | Louisville | April 2-16 |
| Jessamine | J. A. VanArsdall | Nicholasville | April 19 |
| Johnson | P. B. Hall | Paintsville | April 14 |
| Knott | M. F. Kelley | Hindman | April 28 |
| Knox | F. R. Burton | Barbourville | April 27 |
| Larue | D. V. Gaddie | Hodgenville | April 3 |
| Laurel | Oscar D. Brock | London | April 11 |
| Lawrence | L. S. Hayes | Louisa | April 16 |
| Lee | A. B Hoskins | Beattyville | April 14 |
| Leslie | John H. Kooser, Acting Secretary | Hyden | |
| Letcher | R. Dow Collins | Whitesburg | April 24 |
| Lewis | J. D. Liles | Vanceburg | April 16 |
| Lincoln | Lewis J. Jones | Houstonville | April 20 |
| Livingston | Wm. C. Davis | Salem | April — |
| Logan | Walter Byrne, Jr. | Russellville | |
| Lyon | H. H. Woodson | Eddyville | April 3 |
| McCracken | Leon Higdon | Paducah | April 11-18 |
| McCreary | R. M. Smith | Stearns | April 2 |
| McLean | W. W. Spicer | Calhoun | April 12 |
| Madison | J. G. Bosley | Richmond | April 19 |

| COUNTY | SECRETARY | RESIDENCE | DATE | 1932 |
|---|---|---|---|---|
| Marion | H. R. Wilbur | Lebanon | April | 17 |
| Marshall | S. L. Henson | Benton | April | 18 |
| Mason | Allen F. Murphy | Maysville | April | 11 |
| Meade | A. A. Baxter | Brandenburg | April | 26 |
| Menifee | E. T. Riley | Frenchburg | April | — |
| Mercer | J. Tom Price | Harrodsburg | April | 10 |
| Metcalfe | P. W. Bushong, Acting Secretary | Edmonton | April | — |
| Monroe | Geo. E. Bushong | Tompkinsville | April | — |
| Montgomery | D. H. Bush | Mt. Sterling | April | 10 |
| Morgan | W. H. Wheeler | West Liberty | April | — |
| Muhlenberg | G. L. Simpson | Greenville | April | 10 |
| Nelson | R. H. Greenwell | Bardstown | April | — |
| Nicholas | F. P. Scott | Carlisle | April | 16 |
| Ohio | Oscar Allen | McHenry | April | 4 |
| Oldham | S. J. Smock | LeGrange | April | 3 |
| Owen | K. S. McBee | Owenton | April | 5 |
| Owsley | D. E. Wilder | Booneville | April | 2 |
| Pendleton | W. A. McKenney | Falmouth | April | 11 |
| Perry | R. L. Collins | Hazard | April | 9 |
| Pike | M. D. Flanary | Pikeville | April | 2 |
| Powell | I. W. Johnson | Stanton | April | 2 |
| Pulaski | M. C. Spradlin | Somerset | April | 12 |
| Robertson | | | April | 16 |
| Rockcastle | Lee Chestnut | Mount Vernon | April | 12 |
| Rowan | G. C. Nickell | Morehead | April | 24 |
| Russell | J. B. Scholl | Jabez | April | 9 |
| Scott | F. W. Wilt | Georgetown | April | 5 |
| Shelby | W. E. Morris | Shelbyville | April | 19 |
| Simpson | N. C. Witt | Franklin | April | 10 |
| Spencer | | | April | — |
| Taylor | W. B. Atkinson | Campbellsville | April | 5 |
| Todd | B. E. Boone, Jr. | Elkton | April | 4 |
| Trigg | H. L. Wallace | Cadiz | April | 25 |
| Trimble | | | | |
| Union | D. C. Donan | Morganfield | April | 25 |
| Warren | Hal Neal | Bowling Green | April | 11 |
| Washington | J. H. Hopper | Willisburg | April | 18 |
| Wayne | R. E Teague | Monticello | April | 5 |
| Webster | C. M. Smith | Dixon | April | 27 |
| Whitley | C. A. Moss | Williamsburg | April | — |
| Wolfe | G. M. Center | Campton | April | 2 |
| Woodford | Chas. F. Voigt | Midway | April | 5 |


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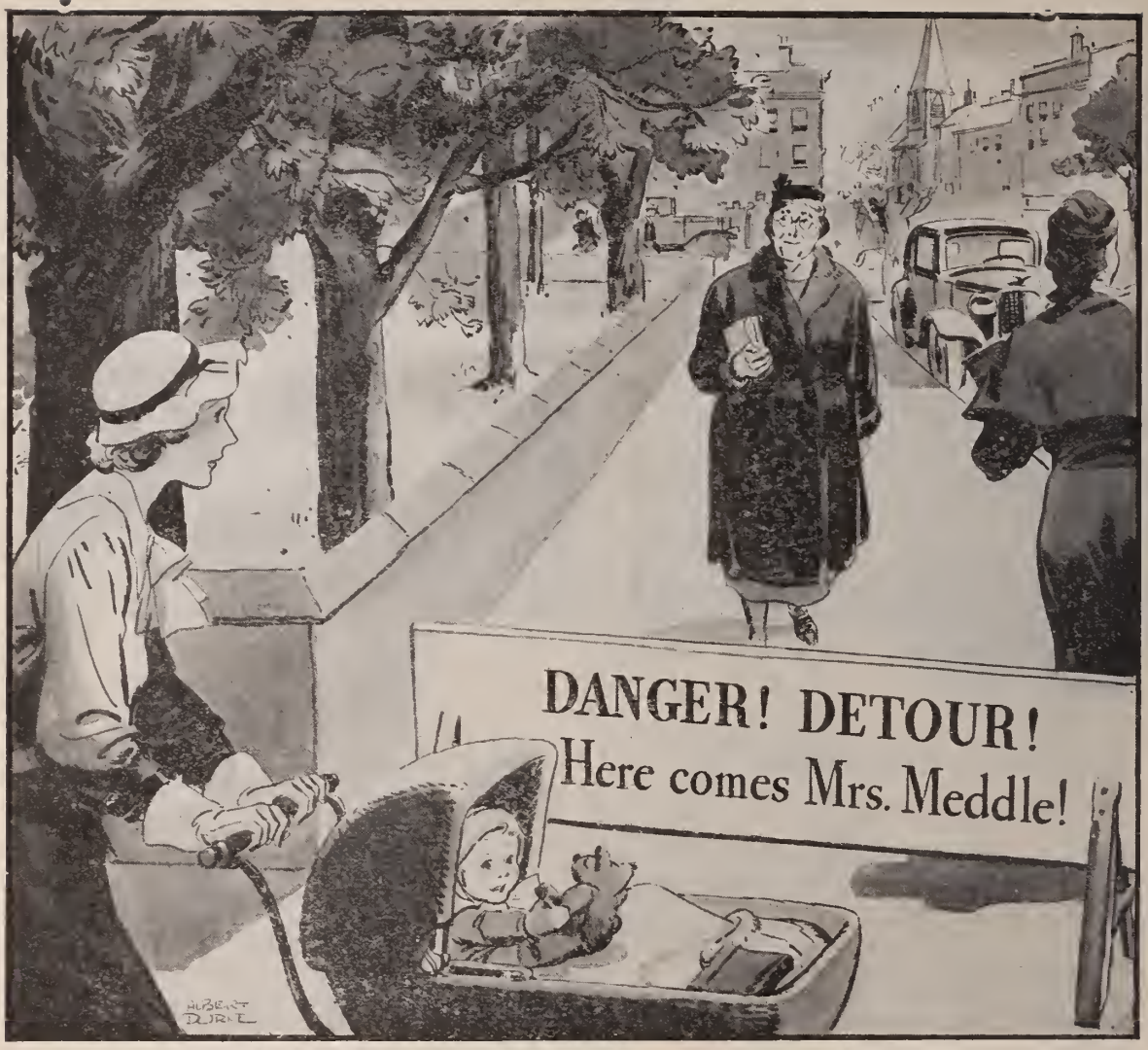
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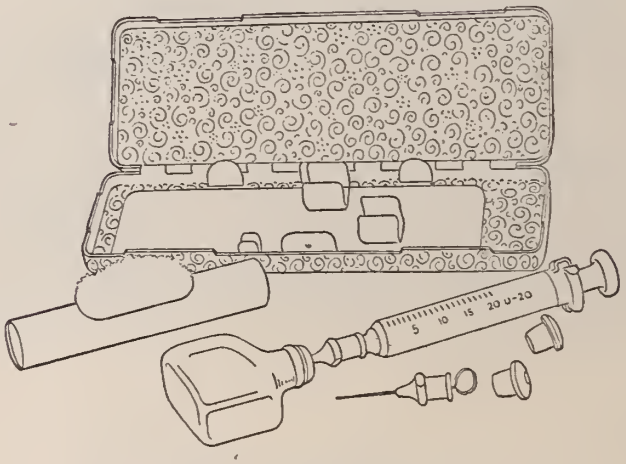
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# KENTUCKY MEDICAL JOURNAL

BEING THE JOURNAL OF THE KENTUCKY STATE MEDICAL ASSOCIATION

**Published Under the Auspices of the Council**

VOL. 32 No. 5 BOWLING GREEN, KY. APRIL, 1934

## A NEW COCKTAIL

Juice from the turnip is recommended as a good depression substitute for orange juice or tomato juice.

Attention is called to its value by Dr. E. W. McHenry of University of Toronto.

In that city one cent will buy 1,000 vitamin C units from turnip juice, whereas the number of vitamin C units from one cent's worth of lemon juice are 180, from orange juice 220, from tomato purchased as juice 170 and from tomato juice prepared from canned tomatoes 180.

Turnips are easily grown in every section of our state and with this new experiment as a guide, this lowly vegetable should assume an important place in the diet of children—in those families where malnutrition is evident.

## RE-ORGANIZATION BILL

The 1934 General Assembly of Kentucky passed three really important pieces of general legislation which are of real moment to every citizen of the State. These are: The new School Code, the State Administration Re-organization Bill, and the Financial Code.

The School Code is of tremendous importance to the children of the State. It was very carefully prepared by a group of business men who worked on the matter for two years. It makes possible the development of a real educational system in Kentucky. Of course, it does not go far enough to get rid of all of the economic inequalities in our several types of school districts. The vested interests of the educational authorities of the cities and the graded school districts are too strong to give way all at once to the evident necessity for a State school system which will give every child an equal opportunity for the practical education necessary in our complex civilization.

The Re-organization Bill is, unfortunately, only a step in the right direction. Personal and factional politics are too much the mode in Kentucky. A few features of the bill are actually reprehensible. The measure as a whole, however, does get rid of a number of the useless activities that have grown up in the State Government and loosely combines others into administrative departments that give promise of more effective and economic administration. As first drawn, the bill would have thrown the public health and medical service programs into the malestrom of public and personal politics, which would have destroyed the splendid organization that has been built in the past fifty-four years.

Griffenhagen and Associates, after surveying the public health activities of the State for several months, reported:

"From the standpoint of the professional approach to its duties and the scope and effectiveness of the work, the State Board of Health is probably the outstanding agency of the State government. It is one of the very few State agencies whose methods and accomplishments rank high in comparison with those of other States."

The presentation of these facts to the Legislative Committee was all that was necessary to secure its approval for a substitute for the section on the State Health Department, which continues, as heretofore, to place the responsibility for public health and medical service squarely on the shoulders of the medical profession. The State Health Department, under the new plan, will be administered by a State Department of Health, which consists of a State Health Commissioner, who will continue to be selected by the Board of Health, constituted as under the present law.

The principle of professional control of examinations for licensure is preserved. This was threatened by the proposal to erect a Bureau of Licensure under the control of "An expert in devising techniques in testing for professional fitness." With the support of the dentists, pharmacists, embalmers, and all schools of medicine, we were able to get legislative and administrative approval for the continuation of the present examining boards, by classifying them as divisions of the State Department of Health, but preserving their autonomy.

The Financial Code makes possible a business-like administration of the State Government; and, properly administered, will mean an end to the waste that has been an almost necessary part of the old haphazard lack of system of administration.

It is important for the profession and the people of the State to know, however, that all of these administrative advances will be illusory without the development of a real

revenue and taxation plan. The tax on real estate has been reduced from thirty cents to five cents on the hundred dollars. To balance the budget, it will be necessary to devise a new revenue system. This will be the chief purpose of a Special Session of the General Assembly, which will be called within the next month or two, provided public opinion has clearly shown that it will approve the development of such a plan by the Legislature. It is essential for the future welfare of the State that a plan be developed so broad that it will enable the schools to be effectively conducted, with competent and well-paid teachers, under the new code. Our health departments must be preserved and financed. The other departments of governthem feel free from any pledges or platforms management provided in the new code. The pauper counties of the State must be redeemed, so that their citizens and their children may have an equal opportunity with its wealthier sections.

There are more young men in the General Assembly now than ever before in its history. They are a thoughtful, courageous group. They are anxious to make Kentucky again one of the progressive, well-governed States. If the people of the State will talk things over with them when they return home, make them feel free from any pledges or platforms that may hamper their considering every proposed plan of revenue and taxation, so that they may accept that which is best for all elements of the citizenship, it will be a great day for the people of our beloved Commonwealth.

## NARCOTICS

It will be recalled that the House of Delegates, at the last session of the Kentucky Medical Association, received a communication from Dr. William C. Woodward of the American Medical Association, calling attention to the fact that the House of Delegates of the American Medical Association had adopted the report of the Bureau of Legal Medicine and Legislation that proper narcotic legislation by each of the several states be urged. A uniform law was drafted and several states have already enacted it. The General Assembly of Kentucky, recently in session, passed the uniform law, and it is now in the hands of the Governor and will probably be approved. The uniform Narcotic Drug Act is intended to accomplish the following purposes.

1. Aid the United States in carrying out its international obligations under the Hague Convention.
2. Arrest the growth and spread of the traffic in illicit narcotics by replacing the present inadequate and conflicting state laws.
3. Utilize and call into full exercise the powers that reside in the states alone, permitting prosecution in such cases as illegal possession, over which the Federal courts have no jurisdiction.
4. Make a necessary division of responsibility in narcotic law enforcement between the Federal and the several state governments, if the general welfare of the citizens of each state is to be maintained.
5. Coordinate enforcement machinery through mandatory co-operation of state with Federal officers.
6. Prohibit sales or transfers of narcotic drugs except under state licenses, to include manufacturers and wholesalers; a requirement solely within the power of the states.
7. Prohibit production of narcotic drugs within state borders, except by specific license and under strict regulation.
8. Include within the definition of narcotic drugs those narcotics which may be prepared synthetically (such as tropococaine) as well as those directly derived from opium and coca leaves.
9. Provide for revocation of licenses for violations of the state narcotic law, direct control of this phase of enforcement being beyond the power of the Federal Government.
10. Strengthen enforcement by making admissible as evidence what are normally privileged communications, when they are used to procure unlawfully a narcotic drug.
11. Require the return of the unused portion of a narcotic drug to the practitioner from whom received, when no longer required as a medicine by the patient.
12. Permit of prosecution in all cases of persons obtaining narcotic drugs by fraud or deceit and particularly in those cases where narcotics are obtained by means of false or altered prescriptions. These cases are difficult, if not impossible, to handle satisfactorily under the present Federal law.

The Commissioner of Narcotics in Washington has urged upon the several medical licensing boards cooperative action, in an endeavor to bring about proper observance of the national and state narcotic laws by practicing physicians.

In a recent report to the State Federation of Licensing Boards, the Federation Narcotic Commissioner called attention to the fact that in each state a number of physicians have been convicted of violation of the Federal law, and it came as quite a shock, when, in the course of his report, he reminded us of the fact that of the total amount of narcotics diverted from legitimate channels, ten per cent is being used by physician addicts. This is a distressing circumstance and one which the profession must face with courage

and with a determination to correct it as far as possible. This is a blow to our professional pride, and the State Medical Association, through its component societies, should cooperate with the State Board of Health in lessening the evil of the illegitimate use of narcotics.

## A. W. WALDEN, M. D.

It is with very great regret that we note the passing of Dr. A. W. Walden of Owingsville in Bath County. Gradually the "doctors of the old school" are becoming fewer and fewer and our modern physicians who have been privileged to contact these older physicians will miss them.

Dr. Walden was typical of those who are distinguished by their gentle bearing and courteous manner. He had practiced medicine in Kentucky more than half a century and was an active member of the Kentucky State Medical Association for more than a quarter of a century. During all this time he was faithful in observing the ethics and high ideals of a true family physician. The memory of Dr. Walden will linger after him and there are many whom he served who will recall the kind deeds and thoughtful interest that followed in the wake of his professional service.

**Vitamin A and Infection.**—Fox states that an animals's resistance to infection depends among other things on an adequate supply of vitamins in the diet. While other vitamins take some share in maintaining this resistance, the part played by vitamin A is unquestionably of greatest importance; it is best regarded not so much as a positive anti-infective agent, indiscriminate in its action, but rather as a constituent in the diet a deficiency of which leads to increased susceptibility to infection. Regarding the important practical question as to the amount of the vitamin that is required, it would appear that: 1. The rarity with which the more characteristic signs of vitamin A deficiency, such as xerophthalmia and night blindness, are encountered among civilized races suggests that the minimal requirements are probably small. 2. There is no doubt that people in different parts of the world are living on diets which are dangerously near and sometimes temporarily below this minimal requirement. 3. The body possesses considerable powers of storing this vitamin and hence the person can if necessary be comparatively independent of the immediate supply in the food. On the other hand, allowance should be made for the fact that in some persons this absorbing or storing capacity is curiously defective. 4. Whether the diet often falls short of the optimal requirement for the maintenance of full health and vigor is at present a debatable question.

## ORIGINAL ARTICLES

### CLINICAL CASE PRESENTED AT STAFF MEETING OF CHILDREN'S FREE HOSPITAL

JOHN T. BATES, M. D.
Louisville.

Patient, age 11 months, female, feeding still on breast plus cream of wheat, egg, soups and lean meats.

Present illness began with vomiting all meals for one day, three days previously developed high fever and was listless. The next day vomited everything it ate. Family thought she had a slight difficulty in breathing.

The child given an enema with good results. Suddenly she rose up in bed, became rigid, mouth drew to one side, saliva driveled from mouth and the arms and legs shook. Feet and hands became cold. Blueness around mouth noticed. This spasm lasted 35 minutes. She remained feverish and in the evening had another spasm lasting 20 minutes, which was relieved by a soda enema.

Physical examination: showed temperature 105, pulse 100, respiration 32.

The skin, warm and dry otherwise negative. The ears, both drums reddened but showing light reflex. Nose, slight serous discharge. Mouth, pharynx red and injected. Thorax, slight lag of right side. Small area of bronchial breathing post. in region of middle lobe. Dullness over this area. No rales heard. Heart, negative except for tachycardia and slight systolic murmur at apex not transmitted.

Clinical impression showed lobar pneumonia (right) acute rhinitis, acute pharyngitis, acute catarrhal otitis media.

Blood count on admission: Hg. 80%, WBC 17,050, Poly 68, lymph 32. Vaginal smear, negative, tubercuiin negative.

Child was given a colonic irrigation and fluids were forced. Also given Larrabee's fever mixture. Tepid sponge also ordered and given. In spite of this temperature rose to 106. Ice caps then were ordered and her temperature fell to 103. Respiration rose to 40.

A chest plate the following morning was negative showing slight transverse diameter increase of heart and some emphysematous changes only.

Temperature remained between 104 and 106 for three days when aspirin and soda bicarb was ordered. There was profuse diaphoresis and temperature fell to 100. The aspirin was discontinued and temperature rose again to 103.

Urinalysis: 10 to 15 WBC per high power field and motile bacilli.

Child was examined by Dr. Andrews who found diminished breath sounds on left and

increased on right. She was alternately cyanotic and normal in color.

Spinal tap was done, fluid clear, cells 7, the sugar was 68.

Temperature fell to 100 on fourth day in hospital and then rose and fell, each day rising less high until it rose only to 100.

SUMMARY

Summary of discussion participated in by Drs. James Bruce, T. Cooke Smith, Harry Andrews and John Bate:

The infant has probably suffered from a respiratory infection as shown by the rhinitis, red and injected pharynx, slight lag in breathing on right side of chest and a small area of bronchial breathing on auscultation and dullness on percussion posteriorly in region of the middle lobe, the latter showing on the x-ray film of the chest and being interpreted as a possible minimal pneumonia. Subsequently bilateral otitis media developed and myringotomy done.

It was suggested that the transient attacks of cyanosis were manifestations of reactions to infection which would be shown by chills in an older child.

The finding of a trace of albumin, 10 to 15 clumped pus cells per high power field, and motile gram negative bacilli in uncentrifuged, fresh catheterized specimens of urine raised the question as to whether or not a urinary infection were the primary cause of the illness, or complication of a respiratory infection.

While pyelitis could have been the cause of the high fever, the cyanosis (in place of chills) the convulsions, and the gaseous intestinal distention, it could not account for the respiratory findings previously enumerated. Further, in carefully observed cases of respiratory infection, pyelitis has been frequently shown to occur, apparently from cocci borne to the kidneys through the blood stream. In a few days the cocci are overgrown by colon bacilli. Further, bacteriemia has been shown by blood culture to be present before a urinary infection, and the latter developed. Some cases in female children are undoubtedly ascending in etiology, and a very large proportion of normal female infants have been shown to have colon bacilli in the bladder urine, although there were no signs of infection. It requires no great imagination to see that a reflux of the ureter is caused by a simultaneous contraction of the bladder and opening of the ureteral orifice. All that is needed is a fertile field for growth. This is furnished by lowered resistance from infection, poor nutrition, dehydration, avitaminosis, and any pathology, congenital or acquired, which interferes with complete drainage of urinary tract.

## KRUKENBERG TUMOR*

HARRY M. WEETER, M. D.

Louisville.

Krukenberg, in 1896, described a peculiar malignant bilateral ovarian tumor presenting a characteristic microscopic appearance, the cells containing mucus which pushed the nuclei to one side of the cell in such a manner as to produce a signet-ring appearance. This type of tumor is usually associated with or secondary to a primary malignancy of the stomach or some other portion of the intestinal tract, although a primary gastro-intestinal tumor has not been demonstrated in all cases. The present case is as follows:

Patient, female, white, age 34. Family history unimportant.

Menstrual history: Rather irregular, last two periods were somewhat prolonged. The last period, which ended just before she was operated upon, came on two weeks early.

Personal history: Gall bladder attack two years previous to present illness. Suspension of uterus two and one-half years ago. Swelling of abdomen eight or nine years ago with gas and belching.

Present complaint: Feeling of tightness in abdomen. Swelling of abdomen to such an extent as to cause some of her friends to inquire if she were pregnant.

Clinical examination revealed palpable tumor in lower abdomen, extending on the right to the umbilicus and on the left not quite so high.

Operation, January, 1933. Free fluid found in abdomen. Right ovary was kidney shaped and measured about 6 inches in diameter. Left ovary was same shape, about 3 inches in diameter. The uterus was found to be fixed to the abdominal wall as result of previous suspension. No other pathological findings at this time. The tumors were thought to be ordinary ovarian carcinomata of the solid type, and were removed. Upon microscopic examination we discovered peculiar cells scattered throughout the fibrous stroma, pushing the nuclei to one side and presenting a typical signet-ring appearance, as described by Krukenberg. Diagnosis of Krukenberg tumor was made but there were no symptoms referable to the gastro-intestinal tract at that time, nor any palpable mass anywhere in the abdomen. No x-ray pictures were made at that time.

In May, 1933, patient began to complain of pain in the lumbar region, becoming very severe at times. On May 27th, she was readmitted to the hospital. Examination showed a marked secondary anemia and a mass in the epigastrium, with marked tenderness over the fourth lumbar region. Clinical diagnosis

*Read before the Jefferson County Medical Society.

was made of carcinoma of the stomach with possible metastasis to the lumbar region. The patient was x-rayed, with findings of carcinoma of the stomach. Patient subsequently died.

This case is particularly interesting because the Krukenberg tumor found and removed several months before clinical symptoms of carcinoma of the stomach were noted.

For permission to use medical and surgical records, acknowledgement is made to Dr. D. Cohen and Dr. L. Frank.

## DISCUSSION

**I. T. Fugate:** I came into this case on May 5th when Dr. David Cohen called and asked that I make a gastro-intestinal study of the patient. She was given barium which was swallowed without difficulty. There was no evidence of cardiospasm. The cardiac one-half of the stomach filled normally. The rugae were apparently normal but it was noted as the barium reached the pyloric portion that a distinct filling defect was readily demonstrated on what appeared to be the posterior margin involving both the greater and lesser curvatures. Films were made showing typical irregular filling defects involving the pyloric one-half of the stomach which without doubt was that of a malignancy. No examination of the colon was made at this time.

Some two or three days later Dr. Cohen again called me and asked that I make films of the lower spine as the patient was having a great deal of discomfort in the lumbar region. Stereoscopic films were made both in the antero-posterior and lateral projections showing a minute defect on the left lateral margin of the fourth lumbar. This appeared to be a necrosis of long standing but in view of the surgical history, also the fact that a definite malignancy was shown in the stomach I made a diagnosis of a probable beginning bone metastasis at that point. Her chest and pelvis were rayed at that time which were negative for either bone or soft structure metastasis.

**John R. Wathen:** In the experience of my father, the late Wm. H. Wathen, and myself, covering a period of some thirty-five years, we saw a considerable number of tumors of this type, although they are considered to be rather rare. They are not extremely difficult of diagnosis and are invariably associated with malignancy somewhere in the gastro-intestinal tract. We found the gall bladder and intestines to be frequently involved. These tumors have a very characteristic appearance, very much like a bunch of grapes, or a polycystic kidney, and are adherent to everything. All we have had were in women who had not reached the menopause. American gynecological text books have very little to say about these tumors and in that respect the Germans are different. In "Ewing Neoplastic Diseases" there are fifteen or twenty pages of beautifully colored pictures, showing the typical signet-ring appearance of the tumor cells. They are not difficult of diagnosis either microscopically or clinically. In two instances we made pre-operative diagnosis.

I have never known a case of true Krukenberg tumor to get well. In most instances they are inoperable and as soon as we recognized a Krukenberg tumor we closed the abdomen and made no attempt to remove it.

**A. J. Miller:** These tumors were first classified as endotheliomata and were supposed to be derived from the small blood-vessels in the ovaries, and it was Krukenberg who finally properly classified them.

The reason these patients almost never recover is that when the ovary has become involved in the neoplastic growth it is by metastasis or transplantation by way of the peritoneal cavity from the primary site. All tumors are similar in that their parenchymal cells are epithelial in type and manufacture mucoid material and of course this function is carried over from the parent tumor. One characteristic of these tumors is that metastasis by way of the blood stream or lymph channels is less common than transplantation by way of the body cavity which it breaks into.

**J. Garland Sherrill:** There was considerable discussion concerning this tumor among the hospital staff, and I took the position at that time that it was secondary to a malignant growth elsewhere in the gastrointestinal tract. Subsequent events proved this to be true.

When Krukenberg reported this tumor in 1896 he described it as a fibrosarcoma of nucleo-cellular structure. In 1889 I saw, with another surgeon, a case in which he had removed a tumor of this type in which the abdomen was almost entirely filled with a muco-cellular growth, so-called myxomatous tissue, and it was considered to be an encephaloid cancer of the ovary. This case impressed me forcibly and I watched the progress of discussions concerning this type of tumor for a number of years.

A tumor of the ovary of the proliferating papillomatous type is one thing and a Krukenberg tumor is another. Carcinoma of the ovary is unilateral and generally originates in the ovary. The presence of this type of tumor is prima facie evidence of a malignant growth in some other portion of the intestinal tract. We hardly ever see this condition in the early stages and these patients usually die within a comparatively short time.

I recall a case I saw with the late Dr. McMurtry in which he removed a double cyst of the ovary of this type. There was free fluid in the abdominal cavity. Within two weeks the woman had a mass in the abdomen as large as a fist and died in a short time.

## SYMPOSIUM: THE ACUTE ABDOMEN

## VISCERAL PERFORATION*

CHARLES A. VANCE, A. M., M. D., F. A. C. S.

Lexington.

This subject has been interpreted to include perforation of the gall bladder and intestinal tract, and perforation by gun-shot or stab wounds but to exclude perforation of the appendix. I shall emphasize the diagnosis and treatment.

In general, the symptoms of acute perforation of any abdominal viscus may be divided into three stages.

First Stage: The stage of contamination which is shown by more or less shock and localized pain and tenderness.

There is great and generalized abdominal pain.

There is livid or ashen appearance.

There is anxious or ashen countenance.

Extremities are cold.

There is sub-normal temperature, 95 or 96.

Pulse is small and weak.

There is shallow respiration and nausea and vomiting.

These symptoms are due to the pain and shock followed the flooding of the peritoneal cavity with the intestinal contents, this sudden stimulation of the nerve ends by the irritating fluids causing reflexed depression of the vital functions. This may be so severe that the patient may feel faint or actually collapse. The pulse temporarily is small and feeble and the face livid, the extremities cold and there is sub-normal temperature. The face shows pain and anxiety and the patient may cry out in agony. The pain is sudden in onset. The patient may be feeling well one moment and the next he is writhing in agony and crying out for some one to relieve him. The site of the initial pain is generally over the perforated viscus but quickly extends downwards and is felt all over the abdomen. The pain may be even greater in the lower adbomen since the escaped fluid collects in the pelvis. The leucocyte count during this stage may be normal or increased slightly. This stage lasts for an hour or two.

Second Stage: State of reaction.

Vomiting ceases.

Abdominal pain is less.

Patient appears much better.

Face regains normal color, temperature is normal.

Pulse is normal or slightly increased, and respiration is still shallow and thoracic in type.

Alae-nasi are working slightly.

Abdominal wall is very rigid, tender and often retracted and flat.

Pelvic peritoneum is tender.

There is dimmution of liver dullness and there is movable dullness in flanks.

There is great pain on movement of the body.

The intensity of the initial shock subsides and there is apparent improvement which takes place in this period and the patient then looks better and feels more comfortable. Muscular rigidity and tenderness are usually present. The circulatory system recovers to such an extent, that the limbs may become warmer and the face normal in color and the pulse normal in frequency and strength and nearly normal temperature. Improvement in symptoms does not imply any stoppage of the spreading of infection throughout the peritoneum. Upon the proper appreciation of the physician of this dangerous latent period depends the patient's chance of recovery from the catastrophe. There should be no difficulty in diagnosis if careful examination is made. No certain guide is to be obtained from the pulse and temperature for they are frequently, normal, nor is the patient's own opinion of his condition always to be trusted for he often expresses himself as feeling much better and he may even think very lightly of his condition but his attitude belies his words. Relief may be sought by drawing up of the legs, if he be asked to turn over in bed the attempt will be made cautiously and with dread of increasing the pain. If no morphine has been administered there will be complaint of generalized abdominal pain, but the intensity will not be so great as at first. The abdominal wall is rigid and tender; the respiration shallow and of thoracic type; the pelvic peritoneum is tender and there may be free fluid and free gas in the peritoneal cavity.

The rigidity of the abdominal wall is a constant feature. The muscles are flat and board like, and it requires deep anesthesia to relax the abdominal wall. Pressure on any part of the abdomen causes pain and probably nausea. Tenderness is often greater in the right iliac fossa in the case of a perforated duodenal or pyloric ulcer. The rigid muscles do not move on respiration, and the movement of the diaphragm is also considerably limited so that breathing is shallow and of the thoracic type. The tenderness of the pelvic peritoneum is a most important sign. This can be determined by a rectal or vaginal examination. Within a very short time of a perforation the pelvis fills with the escaped contents and inflammatory exudate, and, although, no mass can be felt, pressure against the pelvis peritoneal pouch produces pain to the patient.

Movable dullness in the flanks due to free fluid in the peritoneal cavity should

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usually be determinable but shifting of the patient is not always advisable. In doubtful cases it may be of value.

The diminution or absence of liver dullness is the sign produced by free gas in the peritoneal cavity. Percussion over the front of the liver may produce a resonant note even when no free gas is present in the cavity, for it may result from the distended intestines which are sometimes pushed up in case of intestinal obstruction or peritonitis from any cause. If there be no abdominal distention however, diminution of the liver dullness anteriorly is significant. It is always of significance to obtain resonance on percussion over the liver in the mid-axillary line. If in any acute abdominal cases distinct resonance be obtained over the liver in the mid-axillary line about two or more inches above the costal border, one is almost certainly dealing with a perforation of a gastric or duodenal ulcer. It is only in a minority of these cases that the sign is positive. A flat x-ray film may be of value in the diagnosis. It should be differentiated from an attack of diaphragmatic pleurisy. There is an increased leucocyte and polynuclear count during this stage.

Third Stage: The stage of general peritonitis with toxic shock.

Patient vomits more frequently.

Facies is that of late peritonitis.

Abdomen is distended and tender.

Pulse is rapid and small.

Temperature is either slightly febrile or sub-normal.

Abdominal wall is usually not quite so rigid.

Respiration is labored and rapid.

This stage is one that should never be waited for and it is regrettable that it is still too often seen.

Locally the extensive peritonitis is clearly shown by the increasing distention of the abdomen. Distention of the abdomen is not a sign of a perforated ulcer. It is an indication that peritonitis is advanced and that the condition has been allowed to proceed so far that the chance of recovery is slight. Other symptoms are increasing and persistent vomiting, gradual increase in rate and depreciation in force and volume of the pulse and the consequent decrease in temperature of the extremities and body generally. The leucocyte and polynuclear count increase rapidly and sometimes the count is an extremely high one. The abdomen remains tender but in late peritonitis the rigidity greatly lessens owing to the toxic effects on the neuro-muscular system. Finally, as a result of vomiting and depressed circulation, the face becomes pinched and anxious and the cheeks hollow and the eyes dim and beringed with dark circles, and the patient has the so-called Facies Hippocratica which is not so much a sign of peritonitis as it is the mask of death following peritonitis.

Perforation of a viscus is a grave catastrophe. It usually works with dramatic suddenness and unless treated surgically, progresses in a definite manner with a typical course until the death of the patient. It is one of the most easily diagnosed of the acute abdominal conditions and it is the most important to diagnose early and treat promptly by surgical intervention. Delay in the diagnosis of other diseases, of course, is regrettable but does not always cost the patient's life, but in the case of a perforated viscus the delay in diagnosis or mis-diagnosis which leads to temporizing and delay, is equivalent to a death sentence with very slight chance of reprieve. If operation be undertaken within the first six hours recovery is the rule, if the opening up of the abdomen be delayed for twelve hours hours recovery is doubtful. If twenty-four hours or more hours elapse before operation the death of the patient is to be expected. It is very true that some cases recover, although, operated on at a later stage, but they are regarded as exceptional. The very possibility of any condition being due to a perforated viscus is a positive indication of an immediate solution of the problem. If the problem cannot be solved with certainty, immediate operation should be demanded. As I have above indicated the signs or symptoms produced by the perforation vary according to the time which has elapsed since it occurred.

Perforation of the duodenum into the free abdominal cavity is the most common of all types of acute perforations, but fortunately the duodenal content is more or less sterile, small in quantity and has a tendency to gravitate into the region of the appendix, and it is most important to be sure whether one is dealing with an acute appendicitis or a duodenal perforation. The symptoms of perforation of the duodenum and stomach are almost exactly as I have indicated above.

The previous history of the patient should be inquired into very carefully and frequently one is able to make a correct diagnosis by the previous history and the history of the present attack, namely, vomiting at varying times after meals, occasional attacks of hematemesis or melena; pain occurring at varying times after meals and localized in the right upper quadrant and referred to back, sudden severe abdominal pain, rapid and profound collapse increasing rigidity and distention of the abdominal wall. If the patient points to the right upper quadrant as the seat of the first attack of pain we have a fact of great importance to guide us, but the memory of the first pain is forgotten in the rapid onset of

general pains, usually at or below the umbilicus. The site of the pain may be positively misleading from the onset of peritonitis at some point where the fluids may have settled at a distance from the perforation. If the attack has come on while the patient is erect the fluid gravitates into the pelvis and there the chief seat of inflammation may exist. Free gas in the cavity, diminution of liver dullness are important positive evidences of perforation.

In a very small percentage of these cases no previous history of indigestion can be obtained before operation. Afterwards when the patient is convalescing he may remember a great many attacks of indigestion and give you a typical history of a peptic ulcer. Sometimes an ulcer may perforate as a result of a blow on the abdomen, sudden straining, lifting a heavy weight and not infrequently a heavy meal. Characteristic features of the abdomen are its unyielding rigidity and immobility. In no other condition are these phenomena so striking. The symptoms and physical signs above are those which are met with during the first six to eight hours subsequent to perforation, and on these a definite diagnosis can, and should be made in most cases. To recapitulate; a sudden onset of intense and diffuse abdominal pain, occurring in a subject with a previous history of indigestion, associated with a motionless and rigid abdominal wall, with shallow and painful respiration, with a normal or sub-normal temperature, and with some acceleration of the pulse rate and diminution of liver dullness; these symptoms are sufficient to justify a confident diagnosis of visceral and stomach and duodenal perforations.

The case should be operated upon as soon as possible after a diagnosis is made. Operated on in the first or ten hours the patient nearly always recovers. Results are much less fortunate when the operations are done between ten and thirty hours. General spreading septic peritonitis quickly brings many of the patients to a condition in which an operation as a last resort will probably be unsuccessful. A few, however, will after forty-eight hours be greaty improved and operation can be done safely. When it is possible to operate on an acute perforation in the first six or ten hours, not only can the perforation be closed and the contamination prevented from passing into peritoneal infection but measures may be taken for the permanent cure for the conditions which lead to perforation. It is fortunate indeed that an incision one inch to the right of the mid-line through the rectus muscle enables the surgeon to make a comprehensive examination of the appendix, gallbladder, pancreas, duodenum and stomach, and gives him ample opportunity to do whatever is necessary without regard to the preoperative diagnosis; this is the incision I usually use.

The opening is usually found without much difficulty and sometimes the stomach and duodenum can be drawn into the incision. I usually close with Lembert sutures. The area of the ulcer is invaginated by several Lembert sutures and these are placed so that the resulting scar is vertical, that is, transverse to the intestines. A pursestring suture is not so satisfactory, although, when a perforation occurs near the greater curvature of the stomach it may be used. It is well to make assurance doubly sure by fixing over the suture line a portion of fat which may be obtained from the tags of the adjoining lesser or greater omentum. If the tissues are friable it is well to put in mattress sutures. If the operation is undertaken within a few hours of the perforation it is hardly necessary to drain. If the peritoneal exudate be creamy pus or if the operator be in any doubt at all it is wiser to drain. I believe gastroenterostomy is very seldom indicated at the time of the operation for a perforated ulcer. Cases in which it should be done are those in which the invagination of the ulcer causes considerable narrowing in the pyloric region, and that only when the general condition of the patient is very good and the ulcer is obviously a chronic one. When the patient is in a condition of shock or toxemia more harm than good is done by prolonging the operation in order to perform the operation. Many perforated ulcers appear to be acute and give no further trouble after the perforation and closure with sutures. Patients in profound collapse should not be operated on until restorative measures are taken.

In the by-gone days when there were a great many cases of typhoid fever there occurred a few perforated ulcers, but since typhoid fever has become so infrequent, perforation has been very rare. If early diagnosis can be made the patient has a fair chance of recovery. The patient is nearly always a bad risk for any operative measure but still I believe that he should be given his chance with operation. The only contraindication is a moribund condition of the patient. In the early part of this century the death rate following typhoid perforation was between 85 per cent and 90 per cent, and it may be seriously asked if any operation with such faint promise is ever justifiable. The symptoms in detail need not be described. One would suspect perforation in the typhoid patient who had sudden pain in his abdomen followed by nausea and vomiting and tenderness and rigidity, with an increasing leucocyte count, and increasing pulse rate. It might be noted that the acute symptoms of sudden

perforation with abundant extravasation of visceral contents are not always present. In a few, the symptoms are those of peritonitis, and in some the symptoms are so obscure that perforation is not even suspected. Symptoms are more evident in the lower abdomen since it is usually in the ileum that perforation occurs.

Celiotomy should be done as quickly as possible after the diagnosis, with a median or a paramedian incision. The surgeon should exercises extreme gentleness in handling the intestines. The cecum and the entire length of the small intestines should be examined and then in like manner the colon and any perforations found should be closed in the simpliest manner possible and a drain inserted.

Perforation of the gall bladder may occur, but fortunately this accident is rare. Perforation does not always lead to a general peritonitis for often its site is walled off by adherent viscera. There is usually history of long continued gall bladder disease, general attacks of gall bladder colic accompanied sometimes by jaundice and pain in the right upper abdomen which is referred to the right back, and there is a definite past history of indigestion and gas extending over a period of years. The patient usually is sick looking and there may have been chills, and the temperature is raised and the pulse rate is increased and the leucocyte count is gradually increased. The abdomen is rigid, especially, on the right side and there is tenderness and an indefinite sense of feeling a mass in the right upper quadrant. Of course, sometimes this mass may be very easy to feel if the patient is not so rigid and the gall bladder is walled off. If the patient is jaundiced with the above symptoms the diagnosis is an easy one to make.

As soon as the diagnosis is made the abdomen should be opened at once and if the patient's condition will allow it the gall bladder should be removed. In the case of a gangrenous gall bladder it is sometimes possible to remove all of the inside of the gall bladder (the mucous membrane) and a rubber tube sutured near the cystic duct. If the above measures are not possible the gall bladder should be emptied of any stones and a cholecystostomy done. Cholecystostomy is admittedly an imperfect operation in many cases but it is often quite sufficient to tide the patient over the acute stage and permit a later and more complete operation to be done under more auspicious circumstances. In doing a cholecystostomy I use a double purse string suture through the gall bladder around the rubber tube and invert the fundus of the gall bladder if possible and the rubber tube is brought out through a stab wound in the lumbar region of the abdominal wall which is some distance away from the operative incision.

Perforating abdominal wounds may be inflicted by a variety of agencies externally applied but by far the most common are knives and firearms. In wounds below the umbilical level the character and extent of internal injury may bear no relationship to surface evidence. The viscera situated above the umbilicus occasionally escape serious injury despite the passage of bullets entirely through the body. Intestinal and splenic damage is likely to be more extensive following lateral than antero-posterior wounds.

Unfortunately there are no local nor general early symptoms indicative of visceral damage, and for that reason accurate preoperative diagnosis is seldom practicable. Instances have been reported where, following bullet or knife wounds which penetrated the abdominal cavity, no early symptoms developed to suggest visceral injury, and in consequence exploration was delayed awaiting symptoms until the golden opportunity for conserving life had passed. When indicative signs finally appeared celiotomy disclosed numerous intestinal perforations from which leakage had occurred and the patients promptly died of general peritonitis. Such fatalities are, for the most part, preventable

It seems to me to be the height of surgical wisdom when confronted by a patient who has received a perforating gunshot or knife wound of the abdomen, to perform immediate exploratory celiotomy to determine the presence or absence of internal injury, prompt operative intervention under such circumstances with repair of any visceral damage if such has occurred, constitutes a life saving measure which no conscientious surgeon can afford to ignore. Of course, if the patient exhibits evidence of profound shock and hemorrhage and is in the state of collapse, proper treatment should be instituted to overcome these conditions, such as intravenous introduction of saline solution, blood transfusion, the application of heat, the administration of morphine, caffeine, etc. These methods of treatment, however, should not be continued for longer than a few hours. When the patient has sufficiently reacted to safely withstand surgery, the operation should be performed.

The earlier exploration is undertaken, provided visceral damage has occurred, the greater the chance of an ultimate successful outcome. Occasionally there are exceptions to the rule, that visceral wounds eventually prove fatal, therefore, regardless of the time intervening between injury and surgical observation unless the patient is actually moribund, immediate exploration is demanded in the hope of saving life. This statement ap-

plies with greater force to wounds of the lower than the upper abdomen.

It is well known that abdominal contusions from any cause whatever, such as blows, kicks, and crushing violence can cause a rupture or perforation of any viscus and anyone who has been subjected to external violence of such nature as could, either directly or indirectly, produce injury to any of the abdominal viscera, should be given the most careful examination and should be kept under close observation for several days.

The presence or absence of peristalsis is of the utmost importance from a diagnostic or prognostic standpoint. Its early presence indicates that the abdomen or its contents has received some shock or violence, and the persistence or recurrence of this sign is conclusive proof of internal or visceral injury. A decided lessening of active peristalsis is a danger signal if it occurs more than three or four hours after the accident. Active peristalsis is always encouraging in the presence of any abdominal injury.

These patients have initial pain and some shock and a very tender abdomen and an increasing pulse rate and temperature, and also an increasing leucocyte count. The earlier operative treatment is instituted where visceral injury has occurred the greater is the probability of saving the life of the patient, and any patient who has received a severe contusion of the abdomen may have a perforated viscus and, therefore, if the surgeon is not absolutely sure that such has not happened he should be explored as soon as possible.

## Summary

1. The perforation of a viscus is a grave catastrophe. It usually works with dramatic suddenness and unless treated surgically frequently progresses in a definite manner with a typical course until the death of the patient. It is one of the most easily diagnosed of the acute abdominal conditions and it is *the most important* to diagnose early and treat promptly by surgical intervention.

2. If operation is undertaken within the first six hours recovery is the rule, if it is delayed for twelve hours recovery is doubtful, if twenty-four hours or more elapse before operation the death of the patient is to be expected. And it is much better to explore an abdomen and not find a perforation than it is to pursue the policy of watchful waiting on one in which there has been a perforation.

3. Exploratory celiotomy is practically devoid of clinical danger and in penetrating gunshot and knife wounds of the abdomen, immediate operation should be performed. Conservative or non-operative treatment is attended by one hundred per cent mortality where extensive visceral damage has been inflicted.

4. An exploration through a longitudinal incision just to the right of the midline gives the surgeon an opportunity to make a careful exploration and to deal with any or all varieties of perforations.

5. Early operation, that is within the first six hours barring accident, means recovery because the stage of contamination has not yet passed on to the stage of peritonitis, and measures may be taken for the permanent cure for the conditions which lead to perforation.

6. Chronic conditions usually precede perforation and give ample warning before it takes place, and while it is accepted so far as the appendix is concerned it has not been so generally recognized that gall-stones are foreign bodies which need only infection to lead to most wide spread peritonitis, cholangitis, biliary cirrhosis and pancreatitis. Gangrene and perforation of the gall bladder is not uncommon and these cases should be operated on if possible before perforation has occurred.

7. Chronic ulcers of the stomach and duodenum, after a reasonable attempt has been made at medical cure, should be looked on as surgical diseases.

8. Finally let me urge you with all the force at my command to make an early diagnosis in all of these conditions and institute proper and prompt surgical treatment so that the patient will have the best chance for his life and ultimate cure.

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**Treatment of Peptic Ulcer with Okra.**—The experience of Meyer and his associates with powdered okra, in a selected group of carefully studied ulcer patients, points to the relief of the predominating symptoms of pain and gastric discomfort following a short period of administration. This confirms the recent report of Jones, Ivy and Atkinson. The relief of symptoms despite an active acid response in a greater number of the authors' patients (72 per cent) may seem at first difficult to interpret. It has been shown by one of them that the pain of gastric ulcer is independent of acid secretion They suggest that the associated gastritis is the principal cause of pain. It is likely that the okra relieves the symptoms by alleviating this gastritis and duodenitis. These observations are in accord with the remarks of Mathieu, who raised the question as to whether the favorable results obtained by the use of agar mucin were due to some other factor than a mechanical one. The authors' observation in dogs of the decreased emptying time of the stomach following the administration of okra suggests that this also may be an important factor in the relief of symptoms.

# ACUTE MECHANICAL INTESTINAL OBSTRUCTION

G. Y. Graves, F. R. C. S. E

Bowling Green.

The outstanding feature of intestinal obstruction is its appalling mortality, from 40 to 60 per cent. The death rate has been reduced but little in the last 40 years. The cause of this formidable mortality is late diagnosis and operation. Despite much experimental work and improved technique, the only way that we can materially reduce the deaths lies in earlier diagnosis and treatment. In the treatment of these cases there are only two alternatives, death or operation, and frequently only one, death.

The classical textbook picture of pain, nausea, fecal vomiting, obstipation, distention, visible peristalsis, lowered blood chlorides, high $CO_2$ combining power, high blood urea, diminished, concentrated urine, poor general condition of the patient, shock, collapse, pulse rapidly deteriorating is not only the picture of intestinal obstruction but also of impending dissolution. We must not wait for such a course of events. Diagnosis must be made earlier if we hope to lower our shocking death rate. The diagnosis of early intestinal obstruction is not always easy. In this paper emphasis will be laid upon the symptoms and signs of early obstruction and upon the reasons for failure to make an early diagnosis.

The following are important for diagnosis:

(1) A good history

(2) Occurrence of a colicky intermittent pain

(3) Nausea and vomiting.

(4) Borborygmi and hyperperistalsis heard at the height of the pain

(5) Absence of local physical findings

(6) X-ray examination of abdomen.

A good history may reveal a pre-existing hernia, a previous abdominal operation especially one requiring drainage, or a history of a gradually increasing constipation associated with cramplike pain, borborygmus with relief of pain after the passage of gas. Often intestinal obstruction comes on suddenly, without any warning.

The most important single symptom is the occurrence of a colicky cramp-like, intermittent pain which comes on at intervals, lasts a short time, and subsides to be followed by a painless period. Later it may become continuous. If the mesentery is involved, pain will be present constantly from the first.

This pain may be identified as an intestinal colic by the simultaneous presence of loud, intestinal borborygmi heard with a stethoscope at the height of the pain. These sounds are very much like the dropping of water in a rainbarrel, or like those caused by inverting a bottle and allowing the water to run out. A metallic tinkle heard over the abdomen indicates a dilated tense bowel.

Nausea and frequent vomiting accompany this picture, especially if the obstruction is high. Low obstruction may show little or much vomiting. In the early stage the vomiting is reflex in character, and consists of only gastric and duodenal contents. Later the effortless, copious, foul smelling, yellowish vomitus, the so-called fecal vomiting, appears, but as Sampson Handley says, "It is not a symptom of disease, but rather a sign of impending death."

The absence of local signs on physical examination is one of the most puzzling and characteristic features of a simple obstruction. In all other abdominal disasters, rigidity and tenderness appear early. When a patient gives a history like that above, and upon examination no local physical signs are present, the diagnosis of intestinal obstruction must be given serious consideration. The presence of strangulation changes the picture. It usually exhibits definite tenderness and muscle spasm over the site of the strangulation. The pulse usually quickens much earlier. In contrast to simple obstruction early elevation of temperature to 100 to 101° is usual. Leucocytosis may be present in both but it is usually higher in strangulation. A high count may be taken as a more urgent indication for immediate operation.

One of the most reliable means of the diagnosis of intestinal obstruction is the use of a plain x-ray plate of the abdomen. This is best taken with the patient in a standing or sitting position. The finding of gas in the small intestine of the adult is almost pathogomonic of intestinal obstruction. As early as five hours these gaseous loops may be made out. They are centrally located, dilated, and have their long axes transversely. After about seven or eight hours fluid levels can be seen. The appearance of gas above a definite fluid level is very characteristic. When the bowel is dilated a stepladder appearance may be exhibited. The walls of the bowel will be very thin. Earlier a herringbone pattern due to the gas collecting between valvulae conniventes is present. Also the x-ray plates may determine the level of the blockage. In large bowel obstruction, the colon will be gas filled. Gas is not so constantly present or in such large quantities in strangulation as in simple obstructions. Let me emphasize that gas and fluid levels in the small intestine can be visualized long before distention is clin-

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ically present. Clinically distention may be late in making its appearance or be absent in high obstruction. One should never wait to demonstrate it before making a diagnosis.

There are four major mistakes made that cause difficulty in the early diagnosis of this condition. They are:

(1) Absence of local physical findings and of marked changes in the blood,

(2) The belief that obstipation is early and complete.

(3) Deception of apparently effectual catharsis in the presence of an incomplete acute obstruction, and

(4) Relief of pain by giving of morphine.

When doctors realize that simple intestinal obstruction is the only serious, acute abdominal disaster in which local rigidity or tenderness is absent, the early diagnosis will be easier. This fact alone plus an intelligent history will enable many cases to be correctly solved. That it is a stumbling block is shown by the fact that patients with external strangulated hernias, cases with local physical signs, come to operation much earlier than any other variety of obstruction.

Much has been written upon the low blood chlorides, high blood urea, and the high $CO_2$ combining power of these patients. While these changes almost constantly appear, they are little help in the early diagnosis.

They should be sought for as a prognostic measure as they usually herald a case farther advanced or a case of high obstruction. They are also useful in directing efficient post-operative care.

Obstipation is early and complete in low lying obstructions, but the passage of gas and feces one or more times may occur spontaneously or as a result of enemas given to the patient. The presence of complete constipation is a very important positive sign, its absence may mean little. My plan in these cases is to give two enemas. A soap-suds enema is given and the return of gas and feces noted. Should the pain continue another enema is given in about thirty minutes. Even if gas is expelled, but the pain continues and there are other signs or symptoms pointing to obstruction, operation is urged. Neither do I wait for distention and regurgitant vomiting to accompany the obstipation, for I believe these are late signs and only valuable for prognosis.

The oral administration of castor oil followed by a bowel movement does not mean that operation is contra-indicated. In acute incomplete obstruction, evacuation of the bowels following vigorous catharsis may occur several times and still the patient may not tolerate the incomplete obstruction.

This was brought home to me two years ago when following a pelvic operation, a patient developed a partial obstruction. Vigorous catharsis was carried out and gas and feces were expelled daily, but in spite of this the pain continued, and her general condition deteriorated. Although an enterostomy was done on the seventh post-operative day the patient died. Due to the reliance upon the supposed effectual catharsis, the enterostomy was three days too late.

Morphine, I consider one of the most dangerous drugs that the doctor carries. Many deaths are due to the fact that a hypodermic is given before the doctor has arrived at the diagnosis or before the patient realizes the necessity for operation. With the relief of the pain afforded by the narcotic, the patient's mental attitude changes, and he thinks, "Surely, I am getting better, for my pain is less." Nothing is farther from the truth. All the morphine has accomplished is to postpone the time of inevitable operation several hours when he will be much less able to stand the procedure.

Assuming an early diagnosis of intestinal obstruction, the treatment is simple. Ordinary pre-operative and post-operative care and a laparotomy aimed at relief of tension in simple obstruction or relief of the constriction in strangulation are the ends to be sought. The results will be good.

Unfortunately, most cases are seen late, and the dealing with them requires sound surgical judgment. Two things must be emphasized. (1) Operation must be done immediately and no time lost building up the patient. (2) The simplest procedure that will relieve the tension or strangulation is the best procedure. Better two operations and a live patient than one complete operation and a dead one.

During the hour in which the operating room is prepared the fluid and chloride reserves can be built up by giving physiological normal saline subcutaneously and 5 per cent salt solution intravenously. A Levine tube should be passed into the stomach and it washed until the fluid returns clear. The tube is left in place throughout the operation to prevent the patient from drowning in his own secretions.

I use field block combined with gas oxygen as an anesthetic as I believe that I get about as good relaxation as with ether. Local alone requires too much time and manipulation. These patients stand manipulation poorly. It does not seem good surgery to give a shocked patient spinal anesthesia and depress an already low blood pressure.

Most operations for intestinal obstructions are exploratory as regard to the nature of the obstruction. A right or left paramedian incision is best. Upon opening the abdomen lift the walls carefully. Frequently the site

of the obstruction will be revealed. Next, examine the caecum, if it is dilated, the obstruction is in the colon. Examine quickly the hernial openings. A blood-stained fluid indicates strangulation as did rebound tenderness before opening the abdomen. Frequently the most-dilated gut just above the obstruction will present into the wound. It will be hyperemic. A coil of collapsed intestine traced upward to the point of the obstruction will cause less damage than handling the distended portion. As to the successful outcome of these cases the use of the head rather than the hands will determine the results. The operative procedure must be adapted to the patient's general condition. If the condition is good, relieve the obstruction. If the condition is fairly good, and the obstruction can be relieved, do so but add an enterostomy. If the condition is bad be content with an enterostomy done by Witzels technique as close to the site of the obstruction as possible. Do not waste too much time looking for the obstruction, but pick up the most dilated loop and use it. In simple obstruction, the condition of the patient comes first. If there is any doubt about it do the simplest procedure possible. Save your curiosity for a second operation. Frequently after decompressing the bowel by enterostomy the fecal stream will be re-established and no further procedure will be necessary.

In strangulation, the condition of the bowel comes first. No matter what the patient's condition is a gangrenous bowel must be resected or exteriorized. In cases of doubtful vitality, if the patient's condition is good resection of the small gut segment or exteriorization of the involved large gut is the procedure of choice. If the gut is visable, but in poor condition, short-circuiting or an enterostomy above the damaged segment are useful procedures. One word of caution, when dealing with strangulated hernias always pull out the gut enough to inspect the site of constriction as frequently a small gangrenous area will be present.

The post-operative treatment is important. Nothing must be given by mouth until the normal intestinal stream is established. The patient is placed in semi-Fowler position. Hot moist packs to the abdomen tend to re-establish peristalsis and keep him comfortable. The 5 per cent saline intravenously has been an effective aid in causing peristalsis to return. Physostigmin and pituitrin are also fairly effective. Normal saline by hypodermoclysis, or 5 per cent saline, or 10 per cent glucose with adequate doses of insulin intravenously, or 2 per cent glucose by rectum are important measures. 3000 to 6000 c. c. of fluid per day are necessary. I always feel that the chloride content of the blood and the water content of the body is satisfactory when the urinary output reaches 1000 c. c. daily. Transfusions are indicated in severe cases.

### Conclusions

(1) A patient with colicky intermittent pain associated with nausea and vomiting, hyperperistalsis at the height of the pain, and negative physical findings should be suspected of intestinal obstruction.

(2) Plain x-ray pictures of abdomen are very important aids at arriving at a correct early diagnosis.

(3) Operation should be aimed at the relief of the tension in simple obstruction and at the relief of constriction in strangulation.

(4) The mortality rate can be reduced appreciably only by early diagnosis and operation.

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## ACUTE APPENDICITIS, SOME OBSERVATIONS ON ONE HUNDRED OPERATIVE CASES*

Guy Aud, A. B., M. D., F. A. C. S.

Louisville.

No apology is necessary for adding another to the more than 500 papers that have been written on the subject of acute appendicitis within the last two years. That the appalling mortality rate of acute appendicitis has not been reduced in the last twenty years, despite the improvement in diagnostic and operative skill, is a challenge to the medical profession. Approximately 20,000 die each year, in the registration area of the United States, as a result of acute appendicitis.

In one hundred consecutive cases of acute appendicitis operated upon by the writer it is clearly shown, as has been done so many times before, that the mortality rate in early acute appendicitis is practically nil and that deaths and complications are largely the result of prolonged home treatment or mistreatment before the physician is called.

For purpose of study the cases in this series are arbitrarily divided into three classes:

1. Those cases, forty-five in number, of acute appendicitis in which the abdomen was closed without drainage. In this series there were three cases in which the appendix was ruptured with the formation of a peri-appendiceal abscess. Many of the others were of the suppurative type without perforation; but with localized peritonitis.

2. Those cases, forty-six in number, in which the appendix had ruptured or in which infection had extended beyond the appendix to such a degree as to cause the formation of

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an abscess or an extensive peritonitis, either local or generalized.

3. The cases of long standing, nine in number, with very large abscesses, in which there was marked dehydration and sepsis.

There were 59 males and 41 females; approximately 3 males to 2 females. The average age was 24.2 years. Most of the cases, 68 per cent, occurred in the second and third decades. There were five cases in the first decade, the youngest 3 years of age, and one in the seventh decade. In both of these cases the appendix had perforated and the older patient had a large mucocele of the appendix the size of a banana.

Approximately one-half of the cases gave no history of having had a previous attack and of these 56 per cent required drainage. This would appear to be a strong argument against the belief that is so prevalent among laymen, and a few physicians, that the first attack of appendicitis rarely requires operation. Undoubtedly, many survive the first attack without operation; but, at the onset of an acute attack of acute appendicitis, no one can foretell such a happy ending. It is safer and more conservative to have the appendix removed as early as possible, in the first attack, provided there are no contraindications.

TABLE I

LEUKOCYTE COUNT ON ADMISSION

Appendectomy Without Drainage

45 Cases

| Below 15,000 | 15,000 To 20,000 | 20,000 To 25,000 | 25,000 To 30,000 | |
|---|---|---|---|---|
| 34 | 9 | 1 | 1 | Average 11,800 |

Appendectomy With Drainage

46 Cases

| | | | | |
|---|---|---|---|---|
| 20 | 15 | 7 | 4 | Average 16,7000 |

Drained

Appendix Not Removed

9 Cases

| | | | | |
|---|---|---|---|---|
| 3 | 3 | 1 | 2 | Average 17,200 |

Totals For 100 Cases

| | | | | |
|---|---|---|---|---|
| 57 | 27 | 9 | 7 | Average for all Cases 14,500 |

One Case of Ruptured Appendicitis Had Leukocyte Count of 4350

One Case of Ruptured Appendicitis Had Leukocyte Count of 5000

The average leukocyte count on admission for all cases was 14,500. In 57 per cent the leukocyte count was below 15,000 and in 84 per cent it was below 20,000. Of the cases not drained the leukocyte count averaged 11,800 and 75 per cent were below 15,000. Of the cases requiring drainage 76 per cent had a leukocyte count below 20,000, with an average count of 16,700. The highest leucocyte counts were in the cases with large abscesses, the average being 17,200. In this group 33 per cent were over 20,000. There were two cases of perforated appendicitis with leukocytes below 5,000, both of which recovered. While the leukocytes count is our most valuable laboratory aid in diagnosing acute appendicitis, and frequently plays a large part in determining the time of operation, it should in no way take precedence over the carefully taken history and physical findings. Neither is the leukocyte count an index as to the degree or severity of the pathological process taking place in the abdomen. We have all seen gangrenous, perforated appendices, with small abscesses thoroughly walled off by omentum, in which the leukocyte count was normal or practically so. On the other hand, the leukocyte count may be high and the macroscopic changes in the appendix very slight.

TABLE II

TEMPERATURE ON ADMISSION

Appendectomy Without Drainage

| Temp. Below 100 | 100 To 101 | 101 To 102 | 102 To 103 | |
|---|---|---|---|---|
| 45 Cases | | | | |
| 35 | 9 | 1 | 0 | Average Temp. 99.2 |

Appendectomy With Drainage

46 Cases

| | | | | |
|---|---|---|---|---|
| 14 | 11 | 6 | 15 | Average Temp. 100.6 |

Drained

Appendix Not Removed

9 Cases

| | | | | |
|---|---|---|---|---|
| 4 | 1 | 1 | 3 | Average Temp. 100.4 |

Totals For 100 Cases

| | | | | |
|---|---|---|---|---|
| 53 | 21 | 8 | 18 | Average Temp. for all Cases 100. |

Comparison of the temperatures on admission for the various groups of cases studied shows few to have been excessively high. Only 18 per cent had a temperature of over 102 degrees F. Seventy-four per cent had a temperature of less than 101 F. and 53 per cent were below 100 F. Naturally, the more severely ill cases, those requiring drainage, had the highest temperatures. Seventy per cent had a temperature of more than 101 F. and 32% of more than 102 F. The average for this particular group was 100.6 F. Of the cases not requiring drainage 77 per cent had a temperature of 100 F. or less. In the cases with large abscesses, most of which were long-standing, 44 per cent were below 100 F., and 33 per cent were above 102 F. The average temperature for this group was 100.4 F., while that of all cases studied was 100 F. Temperature alone is not dependable in diagnosing acute appendicitis or in determining the severity of the inflammation present. Many severely ill cases of acute appendicitis will run a comparatively low temperature. Ex-

cessively high temperatures ai rarely seen; and, when present, are usually caused by a complication of the acute appendicitis or some disease other than appendicitis.

In 78 per cent of cases the pain and tenderness had localized in the right lower quadrant by the time the patient was admitted to the hospital. In 5 per cent the pain and tenderness had not localized. The remainder complained of pain in other parts of the abdomen and in the pelvis.

Twenty patients had palpable masses. Fifteen were in the abdomen and five in the pelvis.

TABLE III

DURATION OF ILLNESS IN DAYS

Appendectomy Without Drainage

45 Cases

| One | Two | Three | Four | Five | Average 2.8 Days |
|---|---|---|---|---|---|
| 18 | 4 | 12 | 5 | 6 | |

Appendectomy With Drainage

46 Cases

| | | | | | |
|---|---|---|---|---|---|
| 4 | 9 | 12 | 8 | 13 | Average 4.0 Days |

Drained

Appendix Not Removed

9 Cases

| | | |
|---|---|---|
| 1 Case | 5 Days | |
| 1 Case | 6 Days | |
| 1 Case | 7 Days | |
| 3 Cases | 18 Days | |
| 1 Case | 22 Days | |
| 1 Case | 98 Days | Average 18.8 days |

Average duration of illness for all cases 4.8 days

The time intervening between the onset of the attack and admission to the hospital averaged 4.8 days for the entire series. The importance of early diagnosis and operation is clearly shown in the following figures: Forty-nine per cent of the cases in which the appendix was removed, without drainage, were operated upon within 48 hours. Of the cases requiring drainage only 27 per cent were operated upon within 48 hours and 9 per cent within 24 hours. The average duration of illness for those cases in which the appendix was removed with drainage was four days and of those not requiring drainage 2. 8 days The duration of illness in the nine cases with large abscesses, in which no effort was made to remove the appendix, was 18.8 days. Three of these cases were of 18 days, one of 22 days and one of 98 days duration. The case of 98 days duration had been treated for typhoid fever and was markedly septic and dehydrated upon reaching the hospital. She made a very rapid recovery following drainage of a huge abscess under local anesthesia.

It is rather interesting to note the incidence of nausea and vomiting. Seventeen per cent had no nausea or vomiting. Twelve per cent were nauseated but had not vomited and 71 per cent had both nausea and vomiting. In only 3 per cent was drainage present during the attack; and, in spite of the fact that it is frequently given as an important symptom in the diagnosis of acute appendicitis, I consider it of little significance. Forty-five per cent were costive during the acute attack. The records show only 28 per cent of all cases to have had a cathartic during the attack. Of those requiring drainage 40 per cent had taken a cathartic at the onset of the attack.

TABLE IV

PREOPERATIVE COMPLICATIONS

| | Appendectomy Without Drainage | Appendectomy With Drainage | Drained Only |
|---|---|---|---|
| Tuberculous Peritonitis | 1 | 1 | |
| Intestinal Obstruction (Ileum) | 1 | 1 | |
| Pulmonary Tuberculosis | 1 | 2 | |
| Pregnancy | 2 | 1 | |
| Ovarian Cyst | 3 | | |
| Bronchitis (Acute) | 2 | 1 | |
| Pyelitis (right) | 1 | | |
| Cellulitis (Cervical) | 1 | | |
| Cholecystitis (Acute) | 1 | | |
| Inguinal Hernia (Herniorrhaphy) | 1 | | |
| Cardio-Vascular Renal Disease | | 2 | |
| Dementia Praecox | | 1 | |
| Liver Abscess | | 1 | |
| Ascaris Lumbricoides | | 1 | |
| Mucocele of Appendix | | 1 | |
| Perforation of Appendix (no walling off) | | 17 | |
| Perforation of Appendix (Abscess) | 3 | 23 | 9 |
| Perforation of Cecum | | 2 | |

Many of the cases had preoperative complications or other conditions complicating the acute appendicitis. Perforation of the appendix had occurred in 52 per cent. In 35 of these there was walling off of the infection with abscess formation while in 17 there was none. In two cases the gangrenous area at the base of the appendix had involved the cecum causing it to perforate. In one of these owing to the friability of the cecum, it was necessary to plug the hole in the cecum with omentum. This patient recovered. Of the more common conditions complicating the acute appendicitis there were 3 cases each of pregnancy, ovarian cyst, pulmonary tuberculosis and acute bronchitis. There were two cases each of tuberculous peritonitis and cardio-vascular renal disease. Also two of intestinal obstruction due to involvement of the terminal ileum in the inflammatory process, and one case each of pyelitis, cervical cellulitis, acute cholecystitis, inguinal hernia, dementia praecox, abscess of liver (secondary

to the acute appendicitis), ascaris lumbricoides and mucocele of the appendix.

TABLE V.

POSTOPERATIVE COMPLICATIONS

| | Appendectomy Without Drainage | Appendectomy With Drainage | Drained Only |
|---|---|---|---|
| Wound Infection | 3 | | |
| Acute Bronchitis | 2 | | |
| Parotitis (Suppurative) | 1 | | N |
| Pelvis Abscess | | 4 | 0 |
| Postoperative Ileus | | 2 | |
| Pleurisy with Effusion | | 1 | N |
| Empyema Following Pneumonia | | 1 | E |
| Separation Skin | | 1 | |
| Fecal Fistula-Secondary Hemorrhage | | 1 | |
| Miscarriage | | 1 | |
| Phlebitis Leg | | 1 | |

Of the 45 cases in which appendectomy was done without drainage 6, or 13 per cent, developed postoperative complications. Three developed wound infections, two acute bronchitis and one an acute suppurative parotitis. Most of the complications, both in number and severity, occurred in the second group of cases; those in which the appendix was removed and the abdomen drained. Of these 48 cases 12, or 26 per cent, developed postoperative complications. Four developed pelvic abscess, two postoperative ileus, and one each pleurisy with effusion, empyema following pneumonia, separation of skin edges, fecal fistula and secondary hemorrhage, miscarriage and phlebitis of leg. There were no complications following operation upon the nine cases with large abscesses in which only drainage of the abscess was done. The convalescence in all of the cases of this group was entirely uneventful

As a result of the postoperative complications 10 secondary operations were performed. Some of these were minor procedures and were carried out in the patients room. Four pelvic abscesses were drained, one per vagina and three through the abdomen. Two transfusions were done. One each of the following operations was performed; incision of parotid gland, thoracocentesis, resuture of skin and rib resection.

In this group of cases in which the appendix was removed without drainage (45 cases) the wound was healed in 42 or 93 per cent, upon discharge from the hospital. In three cases there was slight drainage. The average number of days in the hospital for this group was 12. Of the 46 cases requiring drainage and in which the appendix was removed in five the wound was healed upon leaving the hospital. In 32 the drainage was slight, in 5 moderate, and in one profuse. The last was a case complicated by tuberculous peritonitis which ultimately healed. The average stay in the hospital for this group of cases was 24 days. Five of the cases, in which large abscesses were drained without removal of the appendix, left the hospital with slight drainage and four with moderate drainage. The average number of days in the hospital for this group was 20.

The average number of hospital days for the entire series (100 cases) was 18. The greatest number of hospital days for any one case was 114. This was a case of pneumonia followed by empyema and, after a stormy convalescence, made a complete recovery.

There were three deaths among the 100 cases considered in this study. A brief history of each is given.

1. A male, age 7 years, was admitted with a temperature of 100.2 F. and a leukocyte count of 11,000. No other attack. Onset six days previous with nausea, vomiting and severe pain localizing in region of umbilicus. Vomited almost continuously for two days with no bowel movement. Operation revealed a ruptured appendix, general peritonitis, large pelvic abscess and intestinal obstruction. The appendix was removed, abscess drained and an ileostomy done. Convalescence was uneventful and bowels moved regularly. On the twentieth day he suddenly developed excrutiating intra-abdominal pain and collapse. Death occurred in two hours and was attributed to thrombosis, probably mesenteric.

2. A male, age 42 years, was admitted to the hospital in the seventh day of his illness with a temperature of 98 F. and a leukocyte count of 11,700. No previous attack. The onset was accompanied by nausea, vomiting and severe pain which remained generalized. Tenderness and rigidity slightly more marked in right lower quadrant. Operation revealed general peritonitis. Appendix removed and drainage instituted. Did very well for 18 hours following operation when he suddenly developed massive collapse of the lung. Died five hours later.

3. A male, age 40 years, was admitted to the hospital on the fifth day of his illness with a temperature of 103 F. and a leukocyte count of 13,500. Urinalysis showed marked acute nephritis. Was a heavy drinker for years. Took repeated doses of castor oil before calling his physician. Upon admission the abdomen was markedly distended, rigid and painful on palpation. There was beginning cyanosis. Operation revealed general peritonitis. Death followed in 24 hours.

Unfortunately, it was not possible to obtain permission for an autopsy in any of these cases. The first case was so profoundly shocked from the onset that exploration of the abdomen was not considered. He was

given the usual treatment for shock but showed no response. The second case might possibly have recovered under some of the newer methods of treatment for atelectasis; but, it is doubtful owing to the massive collapse of the lung and his general condition. The third case should never have been operated upon as his condition was hopeless when admitted to the hospital.

Individuals react differently toward infection. Greater damage may be inflicted upon one individual, by infection, within a few hours than upon another in a much greater length of time. There is no index by which we can determine the true course of the disease. All attacks of acute appendicitis, however mild at the onset, are potential contributors to the mortality rate.

Such classical signs and symptoms of acute appendicitis as generalized pain shifting to the right lower quadrant, nausea, vomiting, constipation, point tenderness, muscle spasm and rigidity, moderate increase in temperature, pulse rate, leukocyte count and polymorphonuclear differential may be present in a few cases, some are present in a majority of cases and in some cases virtually none may be present. To await their development may become a fatal professional error.

The greater heed in the pre-operative period of acute appendicitis, in the form of early diagnosis, early operation and proper preparation, the smoother the convalescence and the surer the recovery.

Drainage materials, such as gauze, rubber tissue, tubes, etc., are of little value in draining the abdominal cavity, except perhaps in walled off abscesses, as they quickly become walled off themselves and play only a minor part in freeing the general peritoneal cavity of infectious material. They are frequently the cause of postoperative distention, ileus, fecal fistula, adhesions and obstruction.

The mortality rate in cases of acute appendicitis operated upon within 12 hours is less than one per cent. In those cases operated upon late the mortality rate approaches twenty per cent. The public seems not yet to have learned the dangers of nefarious home treatment and delay.

## DISCUSSION

**C. C. Howard,** Glasgow: These represent the real tragedies in medicine and surgery, perforations, and intestinal obstruction.

It has been my experience in the last three years that spinal anesthesia is a great advantage in this type of work. Give your spinal anesthesia high and don't be afraid to give it, give enough that you have plenty of time to operate, at least forty minutes to an hour, and then you can do so much better work. There is nothing so disturbing as to get into an abdomen, hunting an obstruction, or perforation with bad breathing, pushing the intestines down. One of the last things I saw just before I left home was a gunshot wound through the abdomen. Under spinal anesthesia this patient's abdomen was silent and I could go along and take my time, examine all the small intestine, take up the colon, and trace it out, close perforation and look in the pelvis, put in drains, and I could do that as well as I could operate on a cadaver.

I recommend spinal anesthesia. Learn how to give it, give it high enough, and if the patient is able to be operated at all you can give spinal anesthesia. Give it high so you cover the whole abdomen which prevents a great deal of vomiting that you get when you give it a little too low.

**Wallace Frank,** Louisville: We have heard three very interesting papers and all three gentlemen said the same thing, namely, the value of the early institution of treatment after the diagnosis made. That, I think, is the keynote. In questions of abdominal perforation it does not make so very much difference whether you diagnose perforated gall bladder or perforated duodenal ulcer or perforated diverticulitis; the important thing is to recognize that we do have an acute abdominal catastrophe, and to institute treatment when the patient has a chance to get well.

As far as the intestinal obstruction goes, I do want to emphasize what Dr. Graves brought out, the value of the flat plate in making this diagnosis. This also has value in the diagnosis of perforated ulcers of the duodenum. The plate can be taken with the patient in the semi-Fowler position. If there is gas above the liver you are relatively certain, in fact absolutely certain, that you have had a perforation of one of the hollow viscera.

In intestinal obstruction cases, the distended loops with the fluid levels are made out early, and therefore treatment can be instituted before a positive diagnosis can otherwise be made. Of course, the essentials in abdominal diagnosis are not only a careful history, but also a careful physical examination, and in no case with abdominal pain should we omit the examination of the hernial rings or should we fail to examine the rectum.

The symptoms we note in appendicitis where the appendix is located in the pelvis are different in many respects from those seen when the appendix is located in the right iliac fossa. Failure of diagnosis often follows failure to do rectal examination. Not only that, but in many cases of intestinal obstruction, the obstruction is found, especially in elderly people, to be due to carcinoma of the rectum or rectosigmoid, which would otherwise be missed.

In these cases, the less you can do to relieve the patient of his immediate obstruction is best, and unless there is strangulation, the primary

pathology can be taken care of later, especially in malignant disease.

**J. Duffy Hancock,** Louisville: I was particularly interested in Dr. Aud's group of cases, and I think that they were unusually well worked up in that he could give us so much information on each of 100 consecutive cases.

I think there are too many laymen who have the idea that appendicitis is a rather minor disease, that appendectomy is pretty much of a minor operative procedure, and that while some patients may have to be operated, a fatal issue is very uncommon and almost inexcusable. It is only when some relative or close friend dies that these people realize what a serious thing appendicitis is, and I feel that any disease which causes the death of 20,000 people a year in this country is a serious disease, even though a large proportion of those deaths are avoidable.

It is true, and the laymen know it, that many patients who have an attack of appendicitis will recover without operation, but it is just as true that there are many cases which when seen early we cannot determine whether they will subside or whether they will continue to perforation, peritonitis and probable death.

There have been several studies made similar to Dr. Aud's, and while the mortality varies with individual surgeons and individual hospitals, it has been rather plainly shown in all of them that the increased incidence of complications, the increased length of stay in the hospital and the increased mortality are all in direct relation to the delay in operative measure after the condition developed.

I think that we should urge upon our patients the treacherous nature of appendicitis, that we should insist upon early operation and show its advantages. If this can be done there will be many fewer cases than those which were described by the Orator in Surgery at noon today.

**B. J. Dryfuss,** New York City: Mr. President and Gentlemen: I don't want to take up any of your time because you have so many edifying papers and discussions on your program. I am particularly interested in the abdomen, for more reasons than one. Not the least of them is that I am on an enforced vacation as the result of one of those pleasant duodenal ulcer ruptures.

Several important points were well brought out. From my personal experience I know that the pain, the vomiting and the shock are not always as frequent, as general, as pronounced nor as immediate as our text books would lead us to believe.

Unfortunately, we speak of early recognition, but like Dr. Turner who spoke this morning about early diagnosis in tuberculosis, most of our early diagnosis in intra-abdominal ruptures are fairly late, that is, they are not early enough.

I want to impress upon you the importance of one thing that has been of great service to me, and that is the rectal examination. I don't mean that you are going to put your finger in and feel a carcinoma in the sigmoid, though I have a long finger, I can't go that far. As far as that is concerned, most large bowel constructions are not what you might call emergencies; they are gradual. However in the small bowel they demand urgent attention. In these cases I am reminded of what Dr. Bodine used to say: "Get in, get out as quickly as you can, do as little damage as you can, and remember you have a mighty sick patient."

When it comes to these cases, it is very often difficult to find out where your rupture is. I saw a case once years after a duodenal rupture; and his whole peritoneal cavity must have been soiled, but whoever had hold of him certainly drained him. I really learned a lesson from that in drainage. They had a drain in the back, a drain in the pelvis, and at any point where there could be any fluid. That is the only way you can really drain them. That man got well, and nine years afterward I operated on him. At that time, he had, as a result of all the adhesions, that had formed around this ulcer, an absolute constriction. He had a dilated stomach that filled the abdominal cavity, and a gastro-enterostomy was done. Today this man is alive and healthy. We must always consider in such cases the emergency.

I found this about a rectal examination: that when there is an irritation of any kind in the peritoneal cavity, when you insert your finger up into the rectum high enough, and with your hand on the abdomen make a gentle palpation, almost like the obstetrician makes to get a Hegar sign you will get a twinge and cut through that belly just like a knife if you have any active peritoneal condition present; it is even more susceptible than on a rebound with peritonitis. This diagnostic technique I have used very frequently.

**George A. Hendon,** Louisville: There are two phases of this subject that I would like to present to you as pointedly as possible.

The first one is the fact that the calcium content of the blood undergoes a very important diminution in grave peritonitis. It seems sometimes to turn the scales either for or against the patient. In all cases of peritonitis from whatever cause we are accustomed now to make routine calcium estimates, and we find that the calcium sometimes goes as low as 3½ milligrams to 100 c. c of blood, and when the calcium gets that low those patients nearly always die.

It has been our rule and our practice to elevate the calcium. We have found out how to give fluid and nutrition intravenously. You cannot do it by intermittent injection. That is older than mutton-leg sleeves—to go and squirt something in anybody's vein at certain intervals. They say give it slowly. What do you mean by slowly? You mean five or ten minutes to give

a pint or maybe two pints. We give fluid in what the patient needs and no more, because in that way, by the drop method, by the cannula that I have devised and by the apparatus that I have devised, we are able to give just what the patient needs and no more, because the patient will always let you know when you have reached the limit of tolerance.

We add to that solution, which usually consists of Ringer's and glucose 10 per cent, 15 grains of calcium gluconate to each liter of this solution, and we give about 4 liters of the solution in twenty-four hours. That will give us 60 grains of calcium a day. Then in addition we use 20 units of Collips serum to mobilize the calcium, and we find that almost invariably when the calcium has raised to as much as 10, the patient begins to improve.

I want to say that it makes a vast difference how fluids are administered, not what you give so much as how you give it. If you give the fluids after the manner that we have described, you will find that you are working in an entirely new world and the difference will be so remarkable that you will be startled. Some people can take only 15 drops a minute, some can take 80, but they will always let you know by rises in temperature the limits of their tolerance. We also give our transfusions the same way as other fluids.

The other point is the enterostomy. I have described this enterostomy, I have written about it, I have reported it at every meeting I have gone to until I fear I have become a nuisance, but I am going to take a risk and describe it to you again because it is just as far superior to the Witzel operation as an automobile is to an ox-cart. It is so simple and so much more efficacious and so much less dangerous.

We take a Pezzer catheter and string it on a stylette as if we were going to introduce it into the urethra. Then through a small opening, it can be inserted into the intestine when the stylett is removed the mushroom spreads out and holds it in the gut. Then we put in a fine purse-string suture and that holds it in place. In the Witzel operation where you sew the gut to the tube, you so often make punctures with your needle, and often rents through which you get leaks. When the tube is hung out of the incision the weight of it will pull the gut up against the parietal peritoneum and you get adhesions. If you are a little tenderfooted for fear that it might come out, then you take a stitch through the tube and through the skin and hold it that way, I think that an enterostomy is very often the feather's weight that turns the scales to the benefit of the patient. It does a great deal if it is done at the right time, and this is so simple that you can do it any time. You can do this operation just as rapidly as you could change a torn glove in an operation, and we should do these enterostomies in all our cases of diffuse peritonitis. If they don't need them they don't do any harm, if they do need them you are all right, but I would say do this enterostomy in all cases of diffuse peritonitis from whatever cause it may be.

**Question:** How do you get rid of the catheter?

**Dr. Hendon:** You don't have to do that. The patient will get rid of it. When convalescence is established just cut the stem off even with the belly and let it drop in.

**E. A. Stevens,** Mayfield: The essayist left a little doubtful the question of operation after perforation in typhoid fever. I want to make a plea for operation in all those cases. Typhoid fever is old-fashioned and out of date, but there are still some localities where it is prevalent. I have seen four perforations that had operations; two of those died and two of them recovered. They were all done at about eight hours after their occurrence, and two of those men are living now. One of them served in the Navy through the last war, and the other is making a living for his wife and four children. I did three of them, and the last one was done by my partner, Dr. E. C. Walter. I do believe that the death rate is not so discouraging that it is necessary to leave in question whether that operation ought to be done. With the improvements that have been made in this operation, I believe that in those cases where there is perforation and where the physician can get to them before the patients are moribund, that they should all be operated upon.

**C. A. Vance,** Lexington, (in closing): I would like to add something about the experiment, it might be called, in Philadelphia. For the last four, five or six years the Medical Society of Philadelphia has instituted a campaign against the giving of cathartics in acute abdominal pain, and by doing this they have lessened the mortality several per cent. I don't remember the figures. They have gotten the co-operation of all the druggists, they have posters and stickers in drug stores, they send out stickers on their letterheads and bill-heads, asking the patient not to take any cathartic if they have abdominal pain. They believe they have done a big work up there. It has also been tried down in Dr. Royster's locality, in North Carolina.

We have talked about it in Fayette County, we haven't done much else, but I believe it is something that can be done anywhere and I think the Kentucky State Medical Association ought to think about it.

**G. Y. Graves,** (in closing): There is one point I still would like to emphasize, and it is that the usual classical picture of these diseases is a late picture, and too frequently it is a picture that the student learns and the doctor knows, by which he will be able to make a positive diag-

nosis, it is true, but it will be too late to help the patient.

I think that in these conditions where early operation is so absolutely necessary, it behooves us not to try to learn the classical picture, but to try to learn a picture that will save our patient. It doesn't do me any good if I can diagnose a thing and can't help the patient.

I hesitate to disagree with Dr. Howard, for if I consulted my own convenience I would use spinal anesthesia for everything, but unfortunately I saw a death from spinal anesthesia in the operating room, and since then I have been afraid of it. I do most of our cases under field block, splanchnic or regional block, with gas and oxygen, and I feel that I get almost as good a relaxation as I can possibly get with spinal, not quite as good. But in any case, where the condition of the patient is so bad, I feel it is much safer and simpler to do an enterostomy and get out, because these patients stand any sort of operation very poorly.

**Guy Aud,** (in closing): There are many things that I didn't get to bring out in the brief time allotted me. I don't want to leave the impression that I didn't have any deaths in these cases. There were three deaths in this series.

Briefly, the first was that of a boy seven years of age who came to the hospital on the fifth day of his illness with a large abscess and for the past two days a complete intestinal obstruction. I removed his appendix and drained his pelvic abscess and did an enterostomy. This boy got along nicely and I had contemplated letting him go home within the next two or three days. However, on the twentieth day he suddenly developed excruciatng intra-abdominal pain and died in two hours. We felt we were not justified in opening the abdomen on account of his extreme collapse, and unfortunately we couldn't get an autopsy, but undoubtedly the boy died of thrombosis, probably mesenteric.

The second case was a man forty years of age who came to the hospital on the seventh day of his illness. He had a ruptured appendix and peritonitis. He got along very nicely for eighteen hours and developed a massive collapse of the lung, atelectasis.

The third case that died was a man forty-two years of age who came to the hospital in extremis. He lived for twenty-four hours and died as the result of his ruptured appendix and peritonitis. This case never should have been operated upon. He was moribund when he came to the hospital.

Another thing I would like to speak of is drainage. I think the tendency very largely is to get away from too much drainage material in the abdomen. I am not draining cases now that I formerly drained. Fortunately I haven't lost one of this particular type that I haven't drained. Their convalescence is very much smoother, and much more rapid. After all, drains do not drain the general abdominal cavity; the drains themselves very quickly become walled off. This occurs in perhaps six or eight hours, and then all the drain tubes can possibly do is to drain the immediate area surrounding the tubes.

Drainage tubes are a source of considerable irritation. Unquestionably they are responsible for a great deal of distention, post-operative ileus, nausea and vomiting, adhesions, and a lot of post-operative obstruction. We are getting away from drainage, and I think the patient is very, very much better off for it.

If there is an abscess I think it is well and good to drain that patient. If you open an abdomen and at the time of closure there is any seepage of serum or blood at the site where you have separated a lot of adhesions, it is well and good to provide for its drainage.

A drainage tube in the abdomen does not cure peritonitis. Simply because a patient has a peritonitis, don't get the idea that if you put a drainage tube in the belly you are going to cure his peritonitis. That is not true. The drainage tube doesn't cure the peritonitis. The patient cures his own peritonitis.

One thing that is of the utmost importance to remember is this: You must get rid of the thing that is feeding the infection into the peritoneal cavity. We all know that the peritoneal cavity will take care of a tremendous amount of infection, providing that infection is not constantly being poured into the peritoneal cavity. In other words, when you take out the appendix or take out whatever is pouring infection into the abdomen, nature will take care of a tremendous amount of infection that is already present, and don't think that because you fill the patient full of drainage tubes you are going to cure his peritonitis. You are not. You are probably doing more harm with too much drainage material than you are actually accomplishing good.

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**Tuberculous Splenomegaly.**—Schwensen finds only one previously reported case of roentgen treatment of tuberculous splenomegaly (Hallermann). In his personal instance roentgen treatment of the spleen resulted in apparent recovery, the splenic tumor disappearing and the temperature and blood sedimentation becoming normal, with subjective well being and increase in weight. He regards the prognosis, however, as doubtful; roentgenologic signs of pulmonary tuberculosis continue, and as the spleen has not been removed there may be danger of recurrence, os in Hallermann's case. The patient must therefore be kept under constant observation and possibly be given after-treatment.

## POSTVACCINAL ENCEPHALITIS*

N. S. Andrews, M. D.
Louisville.

Encephalitis following vaccination has not been previously reported in Kentucky. Because of its rarity up to the present time but seemingly increasing incidence in this country it is presented to this Society.

It was brought to the attention of the profession in 1924 by Luekseh. Then in 1925 Bastiaance again reported the disease. In the following year Turnbull and McIntosh gave an excellent clinical and pathological description of the disease. In this paper they recalled cases seen by themselves in 1912 and 1922 and reported three cases seen in 1926.

Over 700 cases have been reported in Europe since that time. Up to 1932 there had been only 71 cases recorded in this country. Most of the European cases have come from Holland, England, Germany, Sweden and Norway. None had been reported in Canada until 1929, but since that time cases have been reported from that country. Holland and England have suffered most from this disease producing the greatest number of the European cases.

### Case Report

C. H. Colored female, 6 years old. No history of familial diseases reported.

Past History: Birth. Full term pregnancy; normal spontaneous delivery; birth weight 8 pounds; neonatal period normal in every respect.

Feeding, The mother stated that she fed the baby on the breast until 4 years of age even though the second child was born 2 years after the birth of the patient; no vitamines were given during infancy; present diet normal; appetite good; bowels regular and normal.

Diseases. Pertussus at 4 without complications. Measles at 5 without complications.

Habits. The patient is very nervous and irritable; no personality changes; sleeps 10 hours each night; no eneuresis.

Present Illness. Nine days before admission to the hospital the patient, along with a group of children, was vaccinated against smallpox with the usual technique for this procedure. Nothing unusual was noted in the patient until the afternoon of the 9th day after vaccination. At 5:00 P. M. she came in from play complaining of feeling badly; went to bed and slept. At 8:00 P. M. she awoke screaming, thrashing about and talking incoherently. At 9:00 P. M. she was brought to the hospital in convulsions. There had been no severe reaction around the site of vaccination and the only complaint she had made was that it had itched. She had not complained of pain of the adjacent lymph glands.

### Physical Examination

The child was a well developed and nourished colored female, 6 years of age who was quite delirious, talked incoherently and thrashed her arms and legs about.

The skin and mucous membranes were negative except for a normal vaccination lesion on the left deltoid region that appeared to be about 4 or 5 days old.

Glands. The anterior cervical chain was palpable but not tender. Other examinations, entirely normal.

From this hyperactive stage the patient became drowsy and remained so for about 48 hours after which she gradually regained consciousness and by the 6th day was feeding herself and feeling fine. During the coma period the reflexes of the right side of the body were practically obliterated, whereas they were only sluggishly present on the left side. Babinski's sign was abnormal on the right but normal on the left.

Spinal fluid was obtained under 250 mm pressure (water); contained 1 lymphocyte, no globulin and no growth was obtained on culture.

The blood showed 4,070,000 red cells—66 per cent hb. (Sahli); no stippling was demonstrated; 19,500 white cells—P. 89 per cent, L. 8 per cent, My. 3 per cent.

Old Tuberculin 0.1 Mg. 2 plus reaction; 1 Mg. 4 plus reaction.

Wassermann reaction negative on two examinations.

Urine examination negative.

X-ray of the long bones showed no lead deposits; chest film showed minimum of hilum tuberculosis, no calcification noted.

The temperature never went over 101 F. and at the end of the second day of hospitalization it remained normal. The patient was discharged on the 11th day of hospitalization entirely recovered. Sphincter control was lost for only 48 hours after admission, remaining normal after that time.

The etiology of the disease is as yet unknown but many theories have been offered. Some incriminate the vaccine virus itself; others think that the virus activates a dormant virus in the nervous tissue; others claim it due to dietary or vitamin factors, while still others say it is due to pleomorphic streptococci. Much good experimental work has not confirmed any known theory at the present time.

The method and the preparation of the vaccine has not influenced the incidence of the disease. In the United States ten of the twelve vaccine houses have had cases to occur from the use of their lymph. This is also true of the European manufacturers.

*Read before the Jefferson County Medical Society.

The disease is not partial to either sex—affecting males in about the same number as females. There is, however, a difference of the incidence in the life spans. Infancy is attacked from one-sixth to one-eighth as often as the ages above that. In Holland Dr. Jitta reports the occurrence of 1 case in 25,000 vaccinations in infancy and from this period to 11 years as 1 case in 3,570 vaccinations. In all countries the school ages carry the highest incidence rate.

It occurs practically always with the primary vaccination. However, some have been reported following second vaccinations. The time that it occurs after vaccination is from the 2nd day to several weeks (mostly between 10-13 days). When following a second vaccination the incubation period is much shorter.

McNair Scott describes five types of the disease depending on the area of the nervous system involved. As would be expected each type has its own outstanding symptoms. These types are: (1) Meningitic, (2) Tetanic, (3) Cortical, (4) Brain stem, (5) Lower motor neuron. The more constant symptoms found have been headache, vomiting, drowsiness, fever, tendency toward paralysis, and rigidity of the neck. The spinal fluid is usually clear, nearly always under considerable pressure.

If cells are present they usually number under 100 and are lymphocytes. The blood is usually normal except for a mild leucocytosis under 20,000; with a granulocyte predomination.

The diagnosis must be made from tetanus, meningitis (both the epidemic and tuberculous type), meningismus, encephalitis lethargica, polio-myelitis, sunstroke, hemorrhage, epilepsy, hysteria, lead encephalitis and post-vaccinal tetanus.

The prognosis of this disease is fairly poor. The tetanic type has the poorest prognosis of any of the five types described by Scott. The mortality of the European cases has been 42 per cent while the mortality in this country has been 37 per cent. If the patient gets well the tendency is to completely recover without sequelae. However, this is not always true as some cases have not recovered from paralysis after 2 years. If death does take place it is rapid, running its course in a few days.

The prevention of this disease must be empirical since the etiology is not known. It is thought that vaccination should be done in infancy, since the incidence in this life span is less than in any other period. Also, to make as little trauma in vaccinating the patient as is possible by using 1 superficial insertion, not over one-eighth inch in diameter and use no dressings or shields over the wound.

## DISCUSSION

**A. J. Miller:** The incidence of post-vaccinal encephalitis, as pointed out by Dr. Andrews, is relatively low, being approximately the same as post-vaccinal tetanus. In some years it occurs in approximately 1 case in 250,000 vaccinations; in other years it may be as low as 1 in 500,000. In this country only one case in every million persons vaccinated terminates fatally. So, while the condition may occur and is a distinct problem in some European countries, it is not so much of a problem in this country. Nevertheless, it should be looked out for. Undoubtedly many more cases occur than are recorded. This is the first case of post-vaccinal encephalitis ever presented to this society and, as far as we are aware, the first recorded in the State of Kentucky.

The incubational period of the disease corresponds more or less exactly with time of the development of the pustule. There is a shorter incubational period where it occurs in those vaccinated the second time, undoubtedly due to the fact that the third reaction reaches its height earlier than it does in a primary vaccination.

There are several theories as to the etiology of post-vaccinal encephalitis. First, that it is due to the vaccine virus itself; second, that it is due to some other virus present either by accident or normally in the human body and activated by the fever and general systemic symptoms following vaccination; third, that there is some unknown factor, which we may call factor "X," which acts as a predisposing cause of the disease.

There is very little evidence to support the views that the vaccine virus itself causes encephalitis. If that were true we would expect to have a great many more cases than we actually do. There has been no report of more than two cases occurring following the use of any single lot of vaccine virus either in this country or abroad. In Milan, where they have had the most experience with this condition, they have sent away to other countries, notably Spain, England and the United States, for other types of vaccine virus, and the substitution of this imported virus has not lessened the incidence of the disease in Milan.

There is one factor that stands out; namely, that when you vaccinate an individual you produce more than a local lesion, a generalized condition as evidenced by the fact that the vaccine virus can be recovered from practically every tissue in the body for a considerable time following vaccination. It is also present in the blood-stream and may be recovered from that by passsing an electric current through the blood, the virus collecting at one of the poles. It has been postulated that the immunity conferred by vaccination lies in the fact that the virus is present in the tissues and that when the virus dies out of the tissues, immunity is

lost, and the individual has a primary type of reaction upon re-vaccination. It may be recovered from the central nervous system in cases that have a lethal outcome following the development of encephalitis.

That some other virus is responsible is not provable; no other virus has been isolated but it is a possibility.

In regard to differential diagnosis, it is practically impossible to differentiate encephalitis of this type from that following measles, mumps, chicken-pox, influenza, and various other diseases.

The question of factor "X" remains to be settled. Is it a definite family predisposition to the disease?

The relative importance of post-vaccinal encephalitis is very slight because so small a number—perhaps one in each quarter million persons vaccinated—develop the disease, and only one in one-million terminates fatally.

**John J. Moren:** The only phase of the subject that I would call attenion to is the rapidity of the onset of post-vaccinal encephalitis and the fact that, if the patient recovers, the recovery is complete without any sequelae. Both of these points are illustrated in Dr. Andrew's case, and are observed not only in post-vaccinal encephalitis but also in encephalitis following measles and whooping cough, the pathological findings in all of which are practically the same. Some authors attempt to distinguish between these and encephalitis lethargica and anteropoliomyelitis on the ground that in the latter the gray matter or cells are attacked, while encephalitis following vaccination, measles and whooping cough attacks the principally white matter of the brain.

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**The Odor of the Breath.**—The breath has many important smells. . . . I find that noses vary enormously in their ability to detect this. . . . I have formed the habit of asking my ward clerks to smell the breaths of diabetic patients in the wards, and when the pleasant, faintly fruity odor is evident to me I commonly find that it is undetected by something like one-third to one-half of the firm. Apart from making the diagnosis of diabetes in the presence of glycosuria, it may also quickly settle the cause of a coma and so help to save a life. The uremic breath is another important one, but difficult to describe. It is only moderately unpleasant. It has somewhat fishy qualities; it is not exactly a urinous smell, and yet it is reminiscent of urine just as halitosis is somehow reminiscent of bowel contents. I have not yet determined how constantly and at what level of the rising tide of nitrogen retention it becomes appreciable in the breath, but it has helped me to the diagnosis and prognosis of advanced renal disease.—Ryle, J. A.: The Training and Use of the Senses in Clinical Work, Guy's Hosp. Gaz. 47:421 (Oct. 28) 1933.

## PHYSIOTHERAPY*

R. Hayes Davis, M. D.

Louisville.

This subject was assigned to me by the Program Committee and is one that I should not have chosen of my own volition. I did not write a paper because the subject is so extremely broad it would be almost impossible to cover it thoroughly, and it is my purpose to discuss only the more important practical points and leave it to those who discuss the paper to bring out any phases of the subject that I may fail to mention.

The first physiotherapeutic measure I shall discuss is heat. Heat may be applied to the body by various different methods, but however it is applied it produces certain changes that are beneficial in sundry disease conditions. It causes an increase in the capacity of the blood vessels of at least twenty per cent; it has a tendency to kill pain and to increase functional and chemical activity, phagocytosis and elimination. We all agree that heat does produce these various factors which may be great assistance in the treatment of many conditions. Heat may be applied directly, by means of a hot-water bottle, electric pad, or any other type of direct heat, or by means of hot water in the form of compresses which are so frequently used in many surgical inflammations.

Another valuable and simple means of applying heat is by means of infra-red light, which has a certain penetrating power. Experimentation has shown that if a thermometer be put at the bottom of a large piece of beef and infra-red rays applied at the top, the mercury in the thermometer is raised, whereas application of other forms of heat will not raise the mercury. This is quite conclusive evidence that the infra-red rays have a certain penetrating power into the tissues.

There are many indications for the use of this form of heat. In arteriosclerotic conditions of the kidneys, heat may be applied by infra-red light for the purpose of bringing about elimination. It may be applied directly over the kidneys or by means of several lamps over various parts of the body, producing sweating and increasing the flow of urine. Another important use of heat is in arthritis. This is a condition in which any form of treatment that increases the circulation to the affected part is bound to be beneficial. Infra-red light or other forms of heat may be used to advantage in asthmatic conditions, and various types of inflammation like bursitis, colitis, etc. The pain in colitis is helped materially by infra-red light. It

*Read before the Jefferson County Medical Society.

is also of great value in muscular conditions like neuralgia and neuritis and in the neuralgias incident to pelvic inflammation.

Sweats are of the highest value in many conditions. For many years uremias have been treated by sweats, of course in conjunction with other forms of therapy, but sweats certainly increase the flow of blood and cause the elimination of toxins through the skin. Sweats may be carried out in various different manners. One is by using a hot pack, covering the patient with a blanket saturated in hot water and placing hot-water bottles around him. A more modern way is by using some sort of a cabinet or electric apparatus. One of the simplest of these has a number of electric lights enclosed in a tent-shaped affair which is placed over the patient, covered with a blanket and the lights turned on, and direct heat is applied very effectively by this means. Precautions should always be taken by placing an ice-cap on the head and watching the pulse and general condition of the patient. Some individuals stand sweats very well and others not at all, and these precautions are particularly important in serious conditions such as uremia, where there is failing circulation.

Diathemy is another form of physiotherapy that has come into very great general use during the past few years. Diathermy has a number of uses. One of the most important is the application of heat by means of diathermy and electric current, the heat being carried from one electrode to the other and concentrated in various parts of the body. It is important to bear in mind the size of the electrode you are going to use. Naturally, the larger the electrode the wider the separation of the rays, and vice versa. These rays cross in passing from one electrode to the other, and if you want to concentrate the heat in one particular part of the body you can easily arrange the size of the electrodes so that the crossing of the rays will occur directly at the point where the heat is to be concentrated. In certain conditions this is preferable to the infra-red rays. With the latter the most intense application of the heat is going to be on the surface and the deeper the lesion the less penetration you are going to get, whereas with diathermy the heat may be concentrated in any part of the body.

The diathermy apparatus is also used for various types of cauterization and is, therefore, especially useful to the urologist because he is able to remove bladder tumors and other conditions of that kind by fuguration brought about by the diathermy machine.

Diathemy is also coming into more general use in surgery in the form of the diathermic knife, which has the effect of coagulating the blood and thus preventing hemorrhage.

There are so many uses for the various types of diathermy that I am not going to attempt to discuss any but the most practical.

Diathermy was for a long time used in hypertension cases for its relaxing effect. My personal experience has been that I have seen very little change in the blood pressure in patients while under this treatment.

Another very important form of physiotherapy is the ultra-violet rays, especially during the winter months when there is not much sunshine. It has been found that vitamin "D" is one of the most important elements in the human body, its particular function being the utilization of calcium and phosphorus, without which the body will suffer various types of deterioration. Vitamin D may be demonstrated in cod liver oil and in various kinds of foods. During the winter months when there is not much sunshine certain foods, such as butter and the yolks of eggs, become deficient in Vitamin D, and the average diet does not furnish as much of this vitamin as the system requires. Deterioration in health is the natural result. The principal source of Vitamin D in the body is a substance in the skin known as ergosterol which is converted into Vitamin D by the rays of the sun, and during the winter months with the scarcity of sunshine, we lose the benefit of the conversion of this substance into the vitamin.

Ultra-violet rays are of decided benefit in many conditions. Children in a run-down state of health from almost any cause begin to thrive definitely under ultra-violet ray treatment. It is used extensively in tuberculosis, but a proper selection of cases is very important. When an advanced case of tuberculosis is treated with ultra-violet rays there is apt to be too much reaction, with elevation of temperature. It is important therefore to watch the effect of the treatments in cases of pulmonary tuberculosis. In incipient or arrested cases it is of such great value that practically every tuberculosis sanatorium in the country is today equipped with the necessary apparatus for its application. Some of them have skylights made of a certain type of glass through which the ultra-violet rays of the sun penetrate a room in which the patients are permitted to remain all day. The rays of the sun have a very beneficial effect in tuberculosis, being practically a specific in tubercular peritonitis. I have never yet seen a case of tubercular peritonitis which did not respond to ultra-violet ray treatment.

There are so many conditions in which the ultra-violet rays can be used to advantage that it is useless to attempt to enumerate them all. However, it is well to remember that in conditions in which the patient's

vitality is below par—in fact, wherever the administration of cod liver oil is indicated, ultra-violet ray treatment is of especial benefit. It is used very extensively for its effect on certain types of skin lesions and is of the highest value in preventing hyperemia following the prolonged application of x-rays. It is a good idea to precede x-ray treatment with an application of ultra-violet rays. Many throat men are using ultra-violet light treatment following tonsil operations because of its effect in preventing hemorrhage. This treatment is also used in various types of infections. It is of considerable value in the treatment of boils, in conjunction with other remedies, because of the beneficial effect of the rays upon the skin. Boils indicate a low resisting power on the part of the individual and the staphylococcic infection spreads into the follicles of the skin and causes other boils. Ultra-violet light helps to disinfect the skin and also tends to raise the resisting power of the patient.

There are two types of apparatus for the application of ultra-violet light; one air-cooled and the other water-cooled. One advantage of the water-cooled type is that it has a small projector which can be used so that the rays can be concentrated upon a small area, whereas with the air-cooled type such concentration is not possible.

While I was discussing diathermy I should have mentioned a certain type of treatment which I believe to be of considerable value in dealing with pelvic inflammations. This was impressed upon me by something that happened recently. A doctor who lives in Knoxville wrote to the Mayo clinic describing a certain pelvic condition in a patient of his which had been diagnosed by several doctors. He said the patient did not wish to submit to operation and asked if there was any other form of treatment that might be beneficial in this case. They suggested the Elliott treatment, consisting of using a vaginal electrode with a thermometer in it by means of which the heat in the vagina can be raised to 105 F. without difficulty. This is supposed to have a decidedly beneficial effect in certain types of infection of the tubes and uterus. In my own experience I have found that patients with certain forms of subacute inflammations derive great benefit from this form of treatment.

Galvanic Currents. This form of treatment was formerly used quite extensively but has now been largely replaced by other types of electrical therapy. However, I believe the galvanic current plays a most important part in physiotherapeutics. In using the current it is important to remember that each pole has a decidely different effect upon the human body. The positive pole causes an acid reaction in the tissues. It is astringent, hardens the tissues and tends to check hemorrhage and reduce congestion. It relieves pain due to pressure on the nerves and has a sedative effect. I have seen it used in many cases of neuralgia or neuritis and it has a decided effect in relieving these painful conditions. For many years galvanism has been mentioned in the text-books as a specific for herpes zoster and it certainly has a marked effect in relieving the pain in this condition.

The negative pole causes an alkaline reaction in the tissues, autolyzes the blood vessels, softens the tissues, has a relaxing effect and tends to increase hemorrhage. With this pole pain is relieved by the softening effect upon the tissues. In looking up this subject, I saw mention made of the fact that the negative galvanic pole has a decided effect in softening up scar tissue. Personally I have had no experience with it along this line. I have seen many cases of keloidal formation but have never used the galvanic current in such cases.

In peripheral paralysis the make-and-break of the current causes muscular reaction and helps to relieve the contractions. This treatment is of great value in these paralytic affections because it stimulates the nerves and exercises the muscles. It has been used by neurologists for many years in these conditions.

Galvanism may be applied by means of an apparatus known as a Morse wave generator, which has the advantage that the make-and-break of the galvanic current is automatic and can be controlled so that one may arrange for as many interruptions per minute as are desired. I have seen very good results from this treatment in atonic constipation, the current bringing about contractions of the muscular coat of the intestines which seem to be of considerable importance in relieving this condition.

Baths. Many sanatoria throughout the country have thrived for years on people attracted to them by the various types of baths they offer. It must be borne in mind that in any type of bath treatment, temperature is of the utmost importance. A temperature of 93 degrees F. is known as "indifferent;" it neither stimulates nor relaxes. The higher the temperature is raise above 93 degrees F. the more relaxing is the bath, the more dilatation of the peripheral blood vessels, and the greater the tendency to perspiration. As the temperature falls below 93 degrees F. the bath becomes more and more stimulative. Everyone has experienced the decidedly stimulating effect of a cold shower upon the skin. Considerable use of baths are made in the treatment of various types of asthenia and heart conditions. Sometimes, in order

to get the temperature of the bath very low, a chemical is added, usually sodium chloride or sea-salt and the bath is carbonated by means of bicarbonate of soda and muriatic acid, which greatly lessens the sense of cold and enables the patient to lie in the bath without shivering and there is no decided reaction when he gets out of it.

Nauheim baths have been used extensively in certain parts of the world. In my experience they have been of the greatest value in certain types of heart conditions. I have seen a number of cases in which rest in bed with ordinary heart treatment, followed by graduated exercises would get them to a certain point but they could go no further. As soon as they went beyond that point, they would again have decompensation. In this type of case I have almost invariably used the Nauheim bath with excellent results. If the heart is not too badly damaged many of these patients may be restored to a comfortable and useful life.

In the beginning the bath is given at a temperature of 90 F. with a certain amount of salt. The temperature is gradually lowered and the salt increased and as it gets still lower the bath is carbonated with sodium bicarbonate and commercial muriatic acid. In this manner the temperature of the bath may be gradually reduced to 70 degrees F. for a duration of twenty minutes. If the patient is carefully watched and the temperature not reduced too rapidly he will come out of the bath without a great degree of exhilaration but mildly stimulated. It is important to use the baths cautiously and watch the reaction on the patient because much damage may be done if the patient be too greatly stimulated. This damage is exactly the same as would result from taking too much exercise, weakening the heart muscles instead of strengthening them.

Recently a form of treatment came into use that is called Hyperpyrexia. It is an apparatus for producing artificial fever in the patient. For some time the same thing has been accomplished by using proteins, typhoid vaccine and malaria. The malarial treatment for paresis has been followed by very good results. Hyperpyrexia has been found to be useful in various types of chronic infections and it can now be carried out in a very simple manner by means of the new apparatus, of which there are several, but two are now outstanding. One works by means of a very high-powered diathermy machine and the other utilizes the infra-red light. With either apparatus the temperature of the patient can be raised to any point and continued as long as is desirable. The treatment may be carried out every other day. In paresis the results have been equally as gratifying as those obtained from malarial treatment. I am using this treatment myself and have found the results in many cases most gratifying.

In applying the treatment in arthritis it is important to remember that there are various types of this condition. It is generally believed among the laity that arthritis is always due to an infection, and the moment they begin to have any swelling of the joints they go to a dentist, and have their teeth pulled, often unnecessarily, and many other things are done that could be avoided when the arthritis is due to something other than an infection. Arthritis due to an infection and that due to some other condition can usually be differentiated clinically or by x-ray examination. Of course, in arthritis of the infectious type the focal infection should be removed—that goes without saying, but it is wrong to tell a patient that the removal of the tonsils will cure his arthritis unless it is a type of arthritis that is due to tonsillar infection. Many cases of arthritis are due to obscure metabolic changes, others to intestinal toxaemias, and some to endocrin disturbances. Arthritis that occurs in fat women at the menopause is usually due to endocrin disturbance and these patients get well upon reducing weight and taking thyroid. Unless the trouble has progressed to a point where there is severe bone damage these patients can be assured of a practically certain cure. Cases of metabolic arthritis are divided into hypertrophic and atrophic and they must be treated differently. In the atrophic type of the disease there is insufficient utilization of the salts in the body, such as calcium, phosphorous, etc. These patients must be treated by supplying food containing these salts in great abundance, along with cod liver oil, sunshine and ultra-violet rays to provide a greater supply of Vitamin D. If the disease has not progressed too far, this treatment will greatly benefit the atrophic type of arthritis. In the hypertrophic type different methods of treatment must be employed. Here there is too much utilization of the salts, causing excessive bone formation. Therefore, foods deficient in these salts should be given along with thorough elimination. Many cases have been benefitted by drinking large quantities of distilled water which seems to take off a larger percentage of salts from the body than ordinary water. Anything that supplies heat is naturally beneficial because there is swelling of the joints and congestion. Heat brings about an increased blood supply to the affected parts, relieves the pain and accelerates chemical changes. I think that hyperpyrexia has its greatest value in dealing with arthritis due to infections rather than the type resulting from obscure metabolic changes or endocrine disturbances,

although in the obese case it seems very helpful owing to the fact that it stimulates circulation and metabolism.

**DISCUSSION**

**J. Rowan Morrison:**, Heat is a wonderful thing and so is cold. I lived in the country long enough to learn that the old Arabian proverb to the effect that "The outside of a horse is good for the inside of a man" is true.

I formerly made use of Nauheim baths for a long time and thought they did a lot of good, but after I began substituting massage and graduated exercises I found that my patients got along just about as well as they did with the Nauheim baths.

The infra-red light appears to me to be a very good method, but those who have used it over a long period of time do not seem to get as good results as they apparently did at first.

In regard to the new hyper-pyrexia treatment, a New York physician records 57 cases in which he used this method in the treatment of various conditions, with two deaths. That is a mortality of 3.5 per cent, which is not so "hot" for a hot treatment. I believe it is a good thing and will eventually be worked out satisfactorily, but this experience teaches us that we must be careful in its application.

Physiotherapy and psychotherapy are very closely allied. I am a firm believer in both and believe they can often be used together to great advantage. One disadvantage is that the machines and apparati for properly applying various forms of physiotherapy are so expensive that they add considerably to the cost of medical care, and we should be careful about advising our patients to incur this expense unless we are fairly certain that it will materially benefit them.

**R. Hayes Davis,** (in closing): I do not want to create the impression that I am over-enthusiastic about physiotherapy. I think it has a very definite field in many conditions in the practice of medicine, but it is only in a small percentage of my own cases that I use physiotherapy. There are so many forms of treatment of medical conditions that produce good results much more quickly and satisfactorily than physiotherapy that I have always drawn a very sharp line in its use.

I think Dr. Morrison is absolutely right in his view that physiotherapy and psychotherapy are very closely allied. We all recall the large machines for the application of electricity—static machines I think they were called—which were so much in vogue years ago. I have always believed that the effect of thsee machines was more psychic than anything else. However, I do believe that heat, as applied by diathermy, infra-red light and other forms of heat treatment, has a very definite field in certain conditions, as does also ultra-violet light, and if used with judgment and only in conditions where they are known to have a beneficial effect, the results will be very gratifying

## BRONCHIAL ASTHMA AND OTHER ALLERGIC CONDITIONS*

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The subject of this paper implies that bronchial asthma is an allergic condition. It is most generally assumed to be allergic if we differentiate between it and the dyspneas occurring in certain diseases such as hypertensive heart disease, terminal uremias, tracheal obstructions, and the occasional wheezing found in emphysema, obesity and bronchial pneumonia. I assume that bronchial asthma is a form of allergic disease in which the lung is the organ chiefly involved, and which manifests itself by recurrent attacks of dyspnea characterized by sudden onset, wheezing and prolonged expiration. This asthmatic paroxysm is produced when an allergic individual comes into sufficient contact with the specific excitant to which he is sensitive. Such excitant may be extrinsic irritants such as pollen, dust, toilet powders, flour, drugs or food; or the excitant may be intrinsic, such as focal infections; or it may be due to a combination of both intrinsic and extrinsic factors.

When an intrinsic factor is the cause, if it is feasible to do so, the focal infection may be removed surgically or the condition treated by whatever measure may prove effective, whether it be bed rest, administration of vaccines, use of drugs or any other method that may reasonably be expected to raise the tolerance of the individual or make him comfortable.

When an extrinsic factor is the causative agent, it is the physician's duty, to determine if possible, what substance it might be, and to give the patient relief by either removing such substances from the patient's environment or by building up the patient's tolerance to such excitants by certain specific desensitization methods.

In common with the treatment of all other allergic conditions this is accomplished in part by the usual history, physical examination, and the study of such x-ray and laboratory procedures as may be indicated. In studying a patient from an allergic standpoint, special regards may be paid certain unexplained or unusual symptoms suggesting allergic phenomena as the causative factors, and, in addition, use is made of certain skin tests, and substitute diets, and environment tests.

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### The Skin Tests

To discover the offending agent producing allergic shock in practically all allergic conditions, the skin tests are very important aides. Formerly dried extracts of the materials to be tested were mixed with tenth normal sodium hydroxide or normal saline, and the mixture rubbed into scratches previously made on the forearm or the back. Fresh glycerolated extracts which are now more frequently used probably give more satisfactory results. The scratch tests are used supplementary to the intradermal tests. Tests which are negative to scratch tests may give positive results by this method. Reactions that are positive to scratch test might prove dangerous if tested by the intradermal method, otherwise intradermal tests are more sensitive and should be done with materials not over two months old. The test is made in a manner similar to the tuberculin or Schick test. Another test frequently employed is the patch test in which proper concentrations of the material to be employed are placed in direct contact with the unbroken skin, covered with linen, cellophane and adhesive, and kept in place from 24 hours to 6 days. A marked irritation of the skin constitutes a positive reaction. Other tests are the intraocular and the intra-nasal in which the suspected material is placed in direct contact with the mucous membranes of the respective organs. These tests may prove rather severe and are employed rather infrequently. Serums are sometimes tested in intraocularly and intra-nasal tests are used often in experimental work. Recently it has been noted that the tongue may be used in testing drugs. A small amount of the drug under suspicion may be placed on the tongue and, if accompanied by oedema, the test is considered positive. The number of cases of death due to aspirin sensitivity should cause this test to be more generally used in case of the administration of the drug to allergic patients who either have not previously taken the drug or in whom an idiosyncrasy is suspected. As in all allergic testing, adrenalin 1:1000 should be at hand to thwart any untoward reaction that may develop. Finally we employ the indirect method of testing in which the serum of the suspected allergic individual is injected intradermally in non-allergic controls and these areas tested on the control by intradermal administration of allergens some 5 to 7 days later. This test is largely used in research work and the fact that the blood serum contains the reacting bodies is of considerable importance. It differentiates true allergic reactions to such substances as pollen and food from non-specific reactions to bacteria and tuberculin which, in a strict sense, must be considered non-allergic substances since they are not subject to this passive transfer from one individual to another.

### Substitution Tests

In addition to skin tests, there are a number of so-called substitution tests which may be supplementary to the skin tests and are employed when negative results are obtained by the skin tests. One consists of substituting environment, such as removing a patient to the sea shore or to some part of the world where the suspected allergen does not exist in order to determine whether or not the patient's symptoms are ameliorated. The use of pollen air-filters and so-called allergy-free rooms accomplish a similar purpose. Likewise advantage is often made of substitution diets where foods are the suspected allergen. The Rowe diet is perhaps most frequently used. The usual procedure is to have the patient subsist on a given number of foods containing, perhaps, one meat and one cereal for two days, and observing if the patient's symptoms are relieved. If so, other foods are gradually added and if symptoms reoccur, the offending food is dropped from the diet. If the patient's symptoms are not improved, a different group of foods are substituted or milk alone may be used for the test period. The substitution diets have proved of special value in urticarias, where often the skin is so sensitive that skin tests are of no value. This test used intelligently is extremely valuable. The disrepute which recently seems to have been attached to the tests is apparently due, in part, to their improper application particularly in adult asthmas where foods are usually only secondary sensitizers rather than the principal ones which more often are inhalents such as dust and pollen.

The most important food allergens in the order of their importance are milk, eggs, cereals and chocolate. In infancy, if sensitization exists, it is practically always due to food, with the exceptions of such materials with which the infant might come into contact; namely, wool, silk, orris root, dog hair, cat hair and dust.

Numerous, and for the most part unsuccessful attempts have been made to modify the whole milk protein by boiling and the addition of carbohydrates, so that allergic individuals, particularly infants, may use such milk. It is usually necessary to remove milk from the diet entirely. A product manufactured under the trade name of Cemac is a milk substitute free of milk, eggs and cereal, yet containing carbohydrate, fat, protein minerals and vitamins in sufficient quantities to constitute a whole food. Infants as well as children are able to take the preparation without difficulty and rapid gains in weight are recorded in undernourished, milk-sensitive children.

THE TREATMENT OF ASTHMA

For convenience the treatment of asthma may be considered under the headings: (1) General care and empirical treatment. (2) Specific treatment. The general care consists of all factors that add to the patient's general well being. Particularly during the free intervals from attacks efforts should be made to remove infected teeth and other foci of infection. The anemic patient should be built up with large doses of iron and liver. The patient with a lowered blood calcium or blood phosphorus may be given these chemicals plus cod liver oil or ultra-violet light therapy. Incidentally, the work of Criep, McElray, Ramirez, M. Cohen, and other serious research workers seem to disprove the idea that allergic patients as a group have lower blood calcium than any other group of patients and the specific value of calcium therapy in these conditions is open to serious question.

For years iodine, arsenic, cocaine, nitrites, the coal tar products, atropine and the related alkaloids, have been used in the treatment of asthma and other allergic conditions and certainly in selected cases the use of these drugs has proved beneficial. Unfortunately, as a whole, the medical profession has not sufficiently familiarized itself with the possibilities of these useful drugs and in many cases has left wide a field to be exploited by unscrupulous quacks who make unwarranted claims and grossly swindle the unfortunate patient.

So many physicians have asked me about these various nostrums that I wrote Dr. Arthur J. Cramp, director of the Bureau of Research of the A. M. A., concerning some of the more notorious ones. Dr. Cramp, informed me that "Raz-Mah" a much advertised nostrum contained essentially 4¼ grains of aspirin, one grain of charcoal and ½ grain of caffein. "Frontier Asthma Remedy," concontained to each dose a trfle over 5 grains of potassium iodide, 1-60th. grain of arsenous acid. "Tuckers Asthma Specific" consists essentially of 1% cocain hydrochloride, potassium nitrate and water. In common with nostrums of all kinds, its composition seems to change with the whim of the manufacturer. In 1924 the Journal of the A. M. A. commented "that the tender consideration shown by federal authorities for this Ohio nostrum is a cause for wonder."

In a recent issue of the Journal of the A. M. A. December 19th, 1933, another treatment for allergic conditions was exposed: namely, "The Filtration Method" of Edwin S. Leach, M. D., of Junction City, Kansas. Dr. Leach advocates "the use of "Rhino-Form" (two ounces, double-strength, $2.00) in the treatment of hay fever. This preparation consists essentially of a 7 per cent neutral silver nitrate solution and is purported to be "the first and only real cure for hay fever." In cases of bronchitis and asthma Dr. Leach has what he calls a "local iodine treatment of the air passages," in which a solution of iodine, tincture of belladona, tincture of benzoin in alcohol is vaporized and the vapor inhaled by the patient. Should the physician be called when the patient is in the midst of a violent asthmatic attack, Dr. Leach recommends the use of "Asthmolysin" a proprietary product that the exploiters claim contains "Suprarenal and pituitary harmones." It is essentially adrenalin, although Dr. Leach declares that the effect of one subcutaneous injection of asthmolysin will last longer than any of the common remedies such as adrenalin, morphine, and atropine. In those cases complicated by sleeplessness, Dr. Leach recommends the prescribing of "Painodyne," a proprietary which the Journal of the A. M. A. has characterized as belonging to irrational shot gun mixtures marketed with unwarranted claims.

It is to be hoped that the passage of the Copeland-Tugwell bill or the strengthening of the present pure food and drug act will help protect the public from future unscrupulous exploitation in this respect.

Regarding acceptable methods of the treatment of asthma, adrenalin remains the drug of choice in combating the acute exacerbations. Adrenalin should be given in small doses 3 to 8 minims of 1:1000 solution and repeated if necessary. By this means the extreme nervousness often complained of following administration, may be obviated entirely or in part.

In the so-called Status Asthmaticus, in which the asthma may persist for weeks the adrenalin may be given hourly, and is often best given at these intervals regardless of the urgency for the administration. Potassium iodide in full doses should be given to liquify the sputum. The adrenalin may be given with glucose or saline by means of a venoclysis outfit and the dosage of adrenalin so regulated as to keep the patient comfortable constantly and to avoid the intermittent occurrence of asthma that sometimes occurs even with the broken dose method.

Morphine should be used sparingly for mental and physical exhaustion, sleeplessness and the relief of excessive coughing. The dose of morphine should not exceed 1-6th grain. Atropin should never be used. It makes the sputum more viscid. Bromides apparently are better sedatives than the barbiturates which sometimes seem to aggravate symptoms. Elimination of all materials with which the patient is sensitive is advisable, but specific desensitization during the attack is contra-

indicated. At one of the hospitals in Louisville, we have a ward and one single room fitted with pollen air-filters and furnished so as to be as near allergy free as possible. Considerable use is made of these rooms particularly during the pollen season to relieve patients of asthma. Sometimes a week or more is required before the patients are completely relieved although usually 24 hours or less is sufficient. Extensive surgical operations, of course, should be deferred during these acute attacks although drainage of an acute antrum may be necessary and desirable. The pulse is usually quite rapid but does not call for digitalis or quinidine unless extrasystoles develop. High blood pressure is no contraindication to the use of adrenalin in asthma and not infrequently the extreme hypertension is relieved when the asthmatic paroxysm is controlled. Occasionally, venesection is of value, particularly in this latter type of case. The alkaloids of ephedrine either alone or combined with a sedative, while of no value in the acute attack, is of considerable value in preventing mild seizures and controlling slight wheezing.

The nitrohydrochloric acid treatment originally advocated by Bishop in 1893 and more lately revived by Beckman, has proved disappointing in the treatment of asthma as well as in the treatment of all other allergic conditions. Likewise the use of Acidogen nitrate while apparently of some value in the treatment of urticaria and gastrointestinal symptoms, seems to be of no value in the treatment of either hay fever or asthma.

Fever therapy produced by intravenous vaccines, diathermy, hyperpyrexitors, sterile abscess formation, and short wave radio have yielded rather indifferent results. The use of peptone, tuberculin, vaccines and other non-specific measures if used over sufficient length of time sometimes produce good results. While there is no such thing as a demonstrable bacterial allergy—the straphylococci and the Strep. hemolyticus seem to be the organisms most constantly isolated from the sputum. Intradermal tests with vaccines made from these organisms may be made and the vaccine giving the most redness and irritation is usually the vaccine used. However, it does not seem to make a great difference which bacteria is used and in fact, Nelson, Thomas, and Porter in the December 19th, 1931 Lancet observe that a small amount of protein introduced under the skin periodically will, over a certain short space of time, maintain a person in a state of reduced susceptibility to his allergic spasm.

### Specific Desensitization

The most satisfactory results seem to be obtained in those patients in whom definite demonstrable allergy may be shown. In the pollen, dust and food sensitive cases the best results are obtained. In addition to removing from the environment many allergens such as feathers, hair and epidermal materials to which the patient may be sensitive, specific desensitization by increasing doses of extracts from the known allergens are done. It is well to begin with that dilution that will give a mild reaction to an intradermal test and give progressingly increasing doses until the stronger concentrations about 1-20 are tolerated. At this point the tolerance may be maintained by monthly doses about three-fourths the size of the maximum dose. The patient should be under treatment for at least one year and in many cases it may be necessary to keep the patient desensitized over a much longer period. I have found no advantage of intradermal injection over subcutaneous except in certain co-seasonal pollen asthma cases.

Even when non-specific treatment is used, it has been my purpose to repeat the dose of vaccine or other non-specific at least monthly in order to maintain such tolerance as may be derived from this source. In the near future I hope to report the results of some cases receiving so-called catarrhal, or cold vaccine at monthly intervals to see what results may be obtained in the preventive treatment of the common cold.

### Hay Fever

Among the other allergic conditions, hay fever, a disease of the temperate zone, is probably of most interest. In this section of the country, tree pollen, which occurs in the late spring is the cause of little discomfort. The season lasts about two weeks and since avoidance of contact is so readily obtained, specific desensitization is rarely indicated unless some complicating co-existent allergic symptoms are present. From June until the middle of August the chief cause of hay fever is grass. From the middle of August until the first killing frost the principal cause of hay fever—in fact about 90 per cent of all the hay fever in this section of the country—is due to Ragweed. Grass and Ragweed sensitive patients should be desensitized both for the purpose of relieving the seasonal symptom and as a preventive treatment for Asthma, sinusitis and other complicating allergic manifestations.

As in the desensitization treatment of asthma the initial dose should be the amount that will produce a slight wheel formation when introduced intradermally. This dose may vary from 1:100 to 1:1,000,000 and is usually about 1:10,000. If treatment is begun after the season has started, injections may be done intradermally and as many as three injections may be given daily, dependent upon the reaction. If the treatment is

done before the season starts and ample time is provided, the doses are gradually raised until the patient can tolerate approximately .5cc of a 1:20 dilution, about 50,000 units. These maximum doses are continued weekly throughout the season and about three-fourths of the maximum dose is given monthly throughout the year. Occasionally adrenalin must be given with the injection but it disguises the amount of skin reaction and if given intradermally is rather irritating. This past year I was able to get practically complete relief in all but two of the 57 cases that were desensitized. One, a professor from Bowling Green, was found to have some coexisting allergy which prevented his complete desensitization. The other patient was a Louisville surgeon who was desensitized only to 10,000 units and moved from his usual address to a part of the city where the pollen was considerably heavier.

I do not believe there are many hay fever patients in Kentucky (which, incidentally, has one of the highest ragweed pollen concentrations of any state in the union) who can expect to receive sufficient desensitization by using the ordinary 15 dose commercial package. The maximum dose of these extracts rarely exceed 1500 units and even then are not 100 per cent safe if used incautiously. Obviously, to obtain a tolerance sufficiently high in this vicinity more than 15 injections of pollen extract is necessary. Between 40 and 60 are the more usual averages, and the dose must be maintained throughout the season if satisfactory results are to be obtained with any degree of constancy.

### Vernal Conjunctivitis

Vernal conjunctivitis may be of two distinct types, First, the limbic or corneal variety, characterized by discrete vesicles occurring about the rim of the limbus and a scant watery discharge which occurs during hay fever season and disappears following the first frost, and a second type, the lid type, which may persist throughout the year. This second type is divided into (1) simple follicular, (2) cobblestone, (3) giant granuloma. This type causes more intense itching than the limbic. The simple follicular variety resembles follicular conjunctivits and is often confused with it. The cobblestone and the giant granuloma are varieties of the more advanced stages of the disease. They are characterized by cobblestone appearance of the follicles of the upper lid, a smoky appearance of the inverted lid, and a characteristic ropy lardaceous discharge which peals off without bleeding in large clumped masses and which examined microscopically is characterized by the presence of eosinophiles. The giant granuloma is but an exaggerated form of the cobblestone variety.

Treatment of the limbic variety with extracts of the allergens to which the patient is sensitive , usually hay fever producing atophens, gives excellent results. Treatment of the cobblestone variety requires the closest co-operation between the Allergist and the Ophtalmologist, to get even comparatively satisfactory results. It is rarely sufficient, simply to desensitize the patient to those things to which he shows a definite sensitivity. There are usually tissue changes present which apparently do not respond very favorably to any treatment which is now available. Radium is said to relieve the symptoms although it does not cure the disease. In a personal communication Dr. Adolph Pringst, Louisville states that he had two cases so treated, with good symptomatic results but is rather fearful for a patient to submit to such therapy. Instillation of a solution of sodium carbonate (5 grains to 10 grains to the ounce of water) four times daily plus irrigation with cold boric acid solution seven times daily often gives symptomatic relief. In my experience adrenalin and zinc chloride solutions have not proved particularly helpful. It is desirable to differentiate between this condition and trachoma. Trachoma is rarely attended by itching; there is no characteristic eosinophilic discharge; there is no history of seasonal exacerbation.

### Allergic Rhinitis

Allergic rhinitis is usually due to inhalants, particularly dust and pollen, and is characterized by the grey appearance of the nasal mucosa, a non purulent nasal discharge which contains many eosinophiles, the absence of temperature and leukocytosis characteristic of infection, and the presence of positive skin tests. Not infrequently, however, there may be a rhinitis in which both allergic and pyogenic symptoms are co-existent and the picture may be extremely confusing. These types of cases usually give rather poor surgical results and such surgery as is indicated might better be deferred until all allergic symptoms have been eliminated. A general axiom might be—Never to operate for an allergic condition but to operate for such conditions as would indicate surgical treatment regardless of the allergy present.

Treatment of allergic rhinitis by specific desensitization and avoidance of face powder and cosmetics, feathers or any other substances to which the patient is sensitive, yield very satisfactory results. Iodides seem to be a very helpful drug in this condition whether given intervenously, subcutaneously or by mouth.

### Eczema, Urticaria, Angio-Neurotic Oedema and Drug Allergy.

Practically all infantile eczema are due to foods. Occasionally contact with wool, orris

root, silk and animal hair produce the condition. The foods most often found to be the offending agent are in the order of their importance, milk, eggs, cereal and chocolate. The lesions usually are found in the folds of the skin particularly the creases of the elbows.

Numerous and for the most part unsuccessful attempts have been made to modify the whole milk protein by boiling or the addition of carbohydrates so that these modified milk products may be used by milk sensitive individuals. A product manufactured under the name of Cemac is a substitute food free of milk, egg and cereal, yet containing the necessary fats, protein and carbohydrate minerals and vitamins to constitute a whole food. Infants and children take it readily and rapid gain in weight is reported among malnourished children treated with this preparation. The adult eczemas respond more slowly than the infantile eczemas and often a stimulating dose of x-ray or applications of 5 per cent tar ointment are helpful aids.

### Urticaria-angio-neurotic Oedema

Simple urticaria and hives usually disappear rapidly once the postitive allergens are removed. The use of laxatives, particularly castor oil to empty the intestine or change the form of protein is indicated. Acidogen nitrate often seems to be of value in these cases. In the urticarias without mucous membrane involvement or eczema the scratch tests are of little value. Dependence upon substitution diets is made to determine the offending food. The condition known as angio-neurotic oedema while quite a familiar condition may often be a distressing one to the patient. The lips, face, and extremities of the patient may assume a most grotesque appearance. The most severe cases seem to be associated with the eating of fish. It is interesting to note that similar reactions may occur from glue, often a fish product. The use of adrenalin, soda baths and cathartics seem to give the most prompt relief.

### Erythemia Multiformia and Contact Dermatitis

Erythemia Multiformia is a skin condition occurring usually in Summer time and most usually due to eating fresh fruit or vegetables. It clears up rapidly once the offending food is found and eliminated from the diet.

Contact dermatitis or dermatitis venenata may be caused from almost anything that the patient comes into contact with, not infrequently, nickel and other metals. It may readily be demonstrated by patch testing. The treatment is avoidance of contact or in case of poison ivy or other allergic oils, injection of the oily excitant may be advisable. Contact dermatitis is not subject to atopic hereditary predisposition.

### Drug Reactions

Drug reactions characterized by skin reactions are probably familiar to all of us. It probably is fortunate that the skin is the shock organ in the majority of cases. Sudden death has been reported following the administration of so simple a drug as aspirin. If there is any doubt regarding the patient's sensitiveness to a drug, it is suggested that a small amount of the drug be placed on the tip of the patient's tongue and observed for a short time. If the tongue becomes oedematous the drug is contraindicated. Severe general reactions have occurred even from the testing of drugs in this manner and, as in all other forms of allergic test and therapy, prompt use of adrenalin should be resorted to.

### Gastro-intestinal Allergy

Not infrequently gastro-intestinal symptoms simulating acute appendicitis, gall bladder colic, enteritis or mucus colitis may be allergic manifestations. One patient of my acquaintance was treated for mucous colitis over a period of years and later treated at a tuberculosis sanatarium for one year and become progressively worse—until it was found that he was sensitive to milk—the very substance that he had been encouraged to use in large quantities. In the next six months by omitting milk from the diet the patient gained over 50 lbs. and now weighs over 200 lbs. having had no recurrence of the former condition.

### Allergy Affecting the Nervous System

Convulsions in children are not infrequently due to sensitivity to food. Chorea and epilepsy likewise have been considered as being influenced by allergens. Meniere's syndrome and migrane headaches are frequently due to allergic factors. Likewise the condition known as Paroxysmal tachycardia is considered by some to be an allergic manifestation.

### Other Organs Acting as Allergic Shock Organs

Allergic reactions resembling cystitis or renal colic may occur when the genito-urinary tract acts as an allergic shock organ. Sudden death—possibly the so-called thymic death occurring in children—may be found to be an allergic phenomenon. Anesthetic deaths—particularly those occurring at the beginning of the anesthesia—may be allergic rather than cardiac. Certainly skilled anesthetists have been very cautious in the administration of general anesthetics to patients having asthma or other known allergic conditions. Even local anesthetics may prove disastrous unless it is known that the patient does not have an idiosyncrasy for the particular drug used.

It might be said that any or all the organs of the body might act as a shock organ in sensitive individuals. Already there are nu-

merous practical applications, that have been produced by the study of allergy and in the future such studies may help shed light on such dread scourges—as tuberculosis and cancer.

### Danger of Over-enthusiasm in Application of Allergic Principles

I wish to close this paper repeating the words of caution pronounced by the chairman, Dr. A. H. W. Caulfeild, at the 11th Annual meeting of the Association for the Study of Allergy, at Milwaukee, June 12, 1933. Dr. Caulfeild, said, "As it appears to me, the practice of allergy at the present time is chiefly menaced in two respects. The first is the reporting of allergic manifestations in the individual or a disease group when actually or probably they do not exist. The second is the overlooking of some other condition of more importance to the welfare and health of the patient than any symptom referable to the detected atopen. In contrast to this is the undoubted benefit and satisfaction (mutual to patient and physician) of suspecting and subsequently proving an allergic basis which has been hidden by unusual symptoms—or missed in the usual history. Such result, I believe can be achieved only by those who have paid special attention to and have had a large clinical experience in the treatment of allergic conditions."

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## RECENT PROGRESS IN SURGERY*

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Covington.

Many factors enter into the progress or success of any program. It is impossible to separate one branch of medicine from all other branches and say, "We have made this progress independently." While the different specialties are well recognized no one will stand alone. The human body is not so constituted, it is one complete unit, the various parts of which are intimately related.

Much of the recent progress made in surgery has been due to work done in related branches of medical science. The discovery of insulin made surgical procedure in diabetics relatively safe. The administration of iodine as a pre-operative procedure in certain forms of goiter definitely reduced the surgical mortality in thyroidectomy.

The work on visualization of the gall bladder by Graham and his associates has been of great value in biliary tract surgery. Recently Graham has used the dye (iso-iodeikon) in estimating the operative risk in biliary tract disease. Operation is delayed in cases retaining fifty per cent or more of the dye. His operative mortality has been materially reduced since using this method as a guide.

*Read before the Campbell-Kenton Medical Society.

### Anesthesia

The development in anesthesia in the last few years has been remarkable. In my opinion the improvement in this field has been one of the chief factors in the lowering of surgical mortality.

The work of McKesson-Gwathmey-Lundy-Labat and others is outstanding. In reviewing the literature one is impressed with the fact that any kind of an anesthetic has some disadvantage. McCusky points out the untoward reaction in local and regional anesthesia. Those commonly seen are due to morphine, epinephrin and procaine. Anesthesia was satisfactory in 86.1 per cent of 5687 cases in which operation without a general anesthetic was planned. Marked untoward reaction was noted in 1.8 percent of 80,027 cases injected, and mild reaction in 3 per cent. Sudden untoward reaction is due to injection into a vein—gradual reaction indicates too rapid absorption. A solution above body temperature is absorbed rapidly, a 1 per cent solution gives more severe reaction than does a ½ per cent solution.

Lundy reports 3448 cases of regional anesthesia with somewhat similar results. Spinal anesthesia has been widely used in recent years, and much experimental and clinical work has been reported. There is still a wide difference of opinion regarding its use. A very complete report is given by Foss and Schwalm on the relative merits of spinal and ether anesthesia, based on a study of 2000 closely paralleled operations under each of the two anesthetics. The report gives the types of operations under each anesthetic, the mortality, the death ratio following the two anesthetics, and various other points of comparative study. The report is well worth careful reading. Positive pressure anesthesia and so-called balanced anesthesia have been valuable developments.

The barbiturates have been largely discontinued as anesthetics, and are now being used chiefly as hypnotics. In a report on Ethylene Lundy concludes there is no ideal anesthetic.

### Thoracic Surgery

Thoracic surgery has been a fertile field for study and one in which progress has been made. Harrington attributes the progress made in this field in recent years to: (a) the marked improvement in the method of diagnosis, particularly since the advent of the Roentgen ray, the bronchoscope and the thoracoscope; (b) the recognition of the importance of the pre-operative preparation of patients; (c) the development of effectual means of avoiding open pneumothorax, which has been accomplished by the use of positive

pressure anesthetic; (d) the marked advance that has been made in the type of local and general anesthesia; (e) the development of methods of approach to the thoracic viscera through the bony encasement, with minimal structural loss and deformity; (f) the improvement in methods of post-operative care particularly in the use of the oxygen chamber.

He reports a series of 17 cases of thoracic tumor in which trans-pleural operation was performed with an operative mortality of 5.5 per cent. In the 9 benign cases there was no mortality, and all the patients were apparently cured. He believes that exploration should be done in all intra-thoracic tumors because of the good results in benign cases and the impossibility, often, to determine the operability or malignancy without exploration.

Phrenicotomy was first done by Bardersheuer for lower lobe bronchiectasis in 1912 at the suggestion of Stuertz. Since that time it has been used in this condition, in old empyema cavities and in pulmonary tuberculosis, more recently it has been used as a preliminary step in thoracoplasty.

Thoracoplasty is being more extensively used as time passes. The classical indication may be said to be unilateral tuberculosis with cavitation. It has been used in a number of other pathological conditions of the thorax, and in certain cases of bilateral tuberculosis affecting only the apices.

Carter reports a series of 90 patients on which he has performed thoracoplasty since 1925 and describes the technique that has been developed in the College of Medicine of the University of Cincinnati and the Cincinnati General Hospital. The steps of the operation are well illustrated. Local anesthesia is used. He lays special emphasis on the method of exposure, meticulous hemostasis, extreme gentleness in handling of tissues, and resection of very long segments of ribs over the diseased area. He advises the use of many stage operations in cases in which the usual two stage operations are considered hazardous.

Graham recently successfully removed an entire lung in a one stage operation for carcinoma of the bronchus. The operation planned was to remove the upper left lobe, but at operation it was found that the carcinoma extended so closely to the bronchus of the lower lobe that it was impossible to save the latter bronchus. Because of this, and the presence of many nodules in the upper portion of the lower lobe—and the lack of a complete inter-lobar fissure it was decided to remove the entire lung. The operation was performed with intratracheal anesthesia of nitrous oxide and oxygen.

Despite the fact that the hilus of the entire lung was suddenly shut off by a tight ligature, none of the signs or symptoms of pulmonary embolism appeared. Four and one-half months following operation the patient had gained 16 pounds.

### Empyema

In the treatment of empyema there is considerable difference of opinion regarding the best method of procedure, some men prefer the closed while others prefer the open method. However, practically all agree that no operation should be done in the acute stage. At this time the patient is usually very sick, and the organisms are at the height of their virulence. It has been shown that the best procedure at this stage is simple aspiration—repeated as necessary—until the general condition of the patient improves and the virulence of the organisms recedes, when more extensive work may be undertaken.

### Urology

Progress in the field of urology has at least kept pace with that in other branches of surgery. Improvement in the handling of prostatic hypertrophy has reduced the mortality in these cases to a fairly satisfactory point. This reduction in mortality has been due largely to better pre-operative and post-operative treatment, and closer co-operation between the urologist, internist and surgeon.

Intravenous urography has been a valuable development. Rowntree and his associates in 1923 first showed that the renal pelvis and bladder could be outlined by intravenous injections of sodium iodide. Various substances have been used since that time, several of which were found to be toxic to certain individuals. Among the latest substances developed, and apparently one of the best is skiodan.

Braasch is of the opinion that the greatest value of intravenous urography is in children and in cases in which cystoscopy and ureteral catheterization is contraindicated or impossible. It will not however displace cystoscopy and retrograde urography.

Walters reports a series of cases in which resection of the renal pelvis was done for hydronephrosis with very satisfactory results in most cases. In one case the condition was bilateral.

A new method of repairing kidney wounds is reported by Lowsley and Bishop in which a flat ribbon gut is used. This ribbon is passed through small loops of kidney capsule and after encircling the kidney is tied preferably over an area of sound kidney substance. This should not be tied too tightly. No needle is passed through the kidney substance. The authors also suggested applicabil-

ity of this method in wounds of the liver and spleen.

### Sympathetic Nervous System

The sympathetic nervous system has been an enticing field for therapeutic and experimental surgery. Operation has been performed in infectious arthritis. Ranaud's disease, Hirschsprung's disease—atonic painful condition of the bladder, and certain cases of Thrombo-angiitis-Obliterans. Of course, improvement cannot be expected in a vessel that is completely occluded, but where there is definite evidence of vaso-motor spasms in the collaterals, sympathectomy may be of value. Adson and Brown report a series of cases of thrombo-angiitis obliterans treated by sympathectomy. They describe the condition and the method of determining cases for operation and give the results obtained in their cases.

Crile reports sympathectomy of the adrenal gland. In a number of cases still showing symptoms of goiter following thyroidectomy, excellent results were obtained by sympathectomy of the adrenal gland.

Witherell reports a series of seven cases in which the superior hypo-gastric plexus was resected for the relief of pelvic pain. The anatomy and physiology of the plexus is briefly reviewed and the types of pain for which the operation is undertaken and the operation itself are described. In the pain produced by metastatic involvement following carcinoma of the uterus, the pain following some pelvic operations, and the pain of dysmenorrhea that is not relieved by medicine this operation may be indicated. It allows the conservation of the female reproductive organs in functional dysmenorrhea.

Before performing any operation on the sympathetic nervous system one should use every possible means to make a correct diagnosis because the procedure is symptomatic

### Fractures

The treatment of fractures is still a subject of much discussion and wide difference of opinion. This alone is sufficient proof that there is yet no ideal treatment for fractures. The use of local anesthetic injected into the hematoma at the site of the fracture and the application of plaster of Paris splints directly to the skin mark a definite advance in this work.

Hendon describes an open treatment of fractures in which he uses what he designates as a bone-key and reports a series of cases in which the method was used. In nine cases of fracture of hip there was one death, a woman in the late stages of cancer of the uterus. Her hip was fractured while lifting her onto the bed pan, and the operation was done to make taking care of her easier. She died of cancer a week later. Many of the other cases were in old people. The oldest patient, age seventy-nine years, went home on the eighteenth day. He states that in fifty operations involving various kinds of fractures he did not fail in a single instance to get a perfect anatomical and functional result.

Illievitz reports a method of treating fractures of the femur that he has used for years with uniformly good results. For the past seven years he has used no anesthetic—it requires no plaster cast, no skeletal traction, no open operation, no traction by means of weights and pulleys, no special table, no plaster room.

### General Technique of Treatment

The limb is placed in modified Boehler splint which acts merely as a sling; the leg is anchored to one of the pulley wheels of the sling, the foot is supported to the perpendicular stand of splint, and the foot of the bed is raised. The weight of the body pulls on the proximal fragment, while the semi flexed position of the knee on the sling helps in fixing the distal fragment.

He points out that the limb is not covered, and is exposed for biophysical stimulation from the start. Daily corrections can be made as indicated. There is no manipulation of the limb. Because of these advantages callus is more rapid and union takes place early. His experience covered thirty-six fractures of the neck of the femur, and fifty-five trochanteric fractures, twenty-three fractures of the shaft, and six fractures of lower end of femur.

In spite of early weight bearing there was not a case of non-union. There was one death from pneumonia in the case of a patient age seventy-nine years who was moribund on admission to the hospital and died on the second day. The ages in eighty per cent ranged between sixty-five and ninty-three years, and in twenty per cent between one and sixty-five years.

The work of Orr in the treatment of osteomyelitis in 1921-1922 reported in 1933 is no doubt familiar to most of you. He recently applied these principles in the treatment of a compound fracture of the tibia with loss of bone and soft tissue. A sliding bone graft was used and the wound was packed open with petrolatum gauze, and the entire limb was placed in a plaster closed cast. The original dressing remained in place twenty-eight days. There was no complication, and roentgenograms made six months later showed firm bony union of upper end of graft. Union of lower end, which was intra-medullary instead of cortical was somewhat delayed.

Vittorio Putti, the Italian surgeon, has added a valuable contribution by his ingenuous operation in which he is able to lengthen the femur two inches. The bone is divided ob-

liquely and traction is used. When the desired amount of lengthening is obtained the traction is discontinued and fixation is applied.

### Pancreas

Surgery of the pancreas has been somewhat neglected. This may be attributed to several causes, the organ is rather inaccessible; it is in close relation to vital structures; the friability of the gland makes controlling of hemorrhage difficult; diagnosis of certain tumors of the pancreas is often impossible; the operative mortality is high.

Finney in 1910 reported a case of resection of the pancreas with recovery and reviews briefly sixteen collected cases in which there was surgical mortality of 50 per cent and only five were alive one year.

For the major part of our advancement in surgery of the pancreas in recent years, credit must be given to the laboratory. Blood chemistry is invaluable in the diagnosis of tumors of the Islands of Langerhans.

Graham reports three cases of islet tumors successfully operated upon. The clinical symptoms and laboratory findings are discussed and the literature on the subject is reviewed. One of the cases had two tumors one of which was overlooked at the first operation. The patient did not improve; at a second operation this tumor was removed with marked improvement in the patient's condition. Reports of cases successfully operated upon are increasing and, the outlook is encouraging.

In an attempt to review the recent progress made in surgery it is possible to mention very briefly only a few of the brilliant achievements.

### Conclusion

A living thing is never still. That which is progress today will be of interest only as history tomorrow. New avenues leading to fertile fields for work are constantly being opened up in the science of medicine and surgery. These will always hold an alluring and absorbing interest for those whose ambition and endeavor are to save lives and relieve suffering humanity.

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**Benign Miliary Lupoid.**—The diagnosis in Sundelin's patient, aged 14, based on the typical roentgen picture of the lungs, and chronic swelling of the parotid glands and of the submandibular lymph glands, accompanied by eosinophilia and monocytosis, with good general condition, was confirmed on histologic examination of an excised lymph gland. An acute exudate pleurisy presented a complication of one week's duration. The parotid swelling disappeared after roentgen treatment, and after two years all symptoms had vanished. The author says that benign miliary lupoid is a general disease varying greatly in localization and symptomatology; skin and bone changes are often absent.

## THE DOCTOR ON THE WITNESS STAND*

Charles Morris

Louisville.

The machine age and, with it, the enormous growth and dominance of motor transportation, had brought about a significant shift of balance in the practice of law. As a result of these phenomena there has been created a new department of jurisprudence, the Workmen's Compensation Board; and, as another result, the majority of cases now tried in our common law courts arise out of automobile accidents. The inevitable consequence has been the development of a highly specialized group of lawyers whose practice is largely devoted to the trial of cases of this kind, either as representatives of injured persons or as attorneys for liability insurance companies.

Now in the trial of the average personal injury case, the presiding judge plays an important part, the lawyers have a great deal to do with the results and the lay witnesses are material factors. But the key man is the doctor. It is within his power to bring about a large verdict, or to smash a case to smithereens. He enters the court room as though he were a member of the nobility. The conventions and the prescribed routine of procedure are suspended in his behalf. There floats about his head a mystical aura of dignity, almost of magic. And woe betide the impetuous barrister who rushes in where angels fear to tread, and dares to question the wisdom or correctness of the medical manifesto. I know because, in my youth, I tried it once or twice with disastrous results.

This is a great, a dangerous power which modern circumstances and conditions have placed in the hands of the physician—a power capable of accomplishing much good or much evil—a power which is not always either wisely or justly wielded.

### History

One of the three major phases of medical testimony which exemplifies this power is evidence regarding the history of the case.

The law gives the doctor a right to testify as to the history given by the patient, to the extent that such history was pertinent to a diagnosis or the determination of a proper course of treatment. This has been judicially determined many times and is stated to be the law in the case of Hill versus Ins. Co., 185 Ky. 520. It seems innocent enough and it has its foundation in justice; yet it is one of the few exceptions to the well-known hearsay

*Read by invitation before the Jefferson County Medical Society, September 18, 1933.

rule. Ordinarily the law will not permit a witness to state the self-serving declarations of another, particularly when such other person is an interested party and present in court. Yet, under the authority of Hill versus Ins. Co., the doctor is permitted to repeat, as a witness, the plaintiff's description of an accident. Here is an example:

A man claims to have been struck by an automobile being driven on the wrong side of the street. That is the sole issue in the case. The defendant denies that he was on the wrong side of the street. There were no other witnesses. Now along comes the doctor, called as a witness for the plaintiff. He is asked, "Doctor, what history did the plaintiff give you?" And he answers:

"He told me that he was standing on the EAST side of Fourth Street when he was struck by a SOUTH BOUND automobile."

So now we have two people saying that the automobile was on the wrong side of the street, although one of them really doesn't know anything about the circumstances.

Of course, the position of the defendant's automobile in the street could have no possible bearing either on a diagnosis or on a course of treatment; but the answer is responsive to the question and the best the judge can do is to admonish the jury not to remember it—a mental feat quite beyond the average juror. Nor is the injustice mitigated by the fact that the doctor is ignorant of the rule. Of course, the jury should realize that the doctor's statement is merely a repetition of the testimony of the injured man and not substantive evidence; but the psychological force of this repetition can be a decisive factor in helping the jury arrive at its conclusion.

Again a doctor may create in the mind of the jury a picture of pain and agony far beyond any pain or agony revealed by examination. Thus, the physician can say:

"The plaintiff gave me a history of a sprained back and stated that he had suffered horrible pain and nervousness, accompanied by inability to sleep, dizziness and nausea." Now the examination may have failed to reveal the slightest sign of injury; the patient's reflexes and behavior may have disclosed no evidence of nervousness. Indeed, the doctor may well believe that the patient was not hurt at all, that he was not nervous, that he did not suffer from insomnia, vertigo or nausea. And yet, by repeating the history given by the plaintiff, the doctor necessarily, though innocently, gives the jury the impression that all these terrible things actually happened to this patient. Notwithstanding the rule of law, as expressed in the Hill case, it seems to me that the ends of justice would be better served by forbidding the doctor to repeat, for the benefit of the patient, anything which the patient told him.

If the courts have proceeded on the theory that the history is essential to an accurate diagnosis, then it would seem that, once that diagnosis is made, the history becomes unimportant. Would it not be more equitable if the doctor's testimony was limited to his findings, his own opinion, based on objective and subjective symptoms and his own prognosis as to future suffering or disability? It is asking too much of a doctor to testify voluntarily against his patient. No one could expect a doctor to say:

"The patient gave me a history of great agony, nervousness, etc., etc.," and then add "but personally I couldn't find a damned thing wrong with him." If the rule were altered and the hearsay doctrine be made applicable to doctors as well as laymen, then there could be no temptation to tell the truth, but refrain from telling the whole truth.

### PRIVILEGE

Now let us glance at the other side of the picture. Apparently in an effort to equalize the effect of the doctrine we have been discussing, the Kentucky Courts have also removed the relations between physician and patient from the category of privileged communications.

I am sure that all of you are aware that a privileged communication is something that is said or done in a confidential capacity, by reason of which neither party can be compelled to disclose it publicly. While the Old English common law did not recognize this relationship, the legislatures of numerous states have adopted the rule which permits a doctor to refuse to divulge anything revealed to him by a patient in connection with his illness. Thus, California, Indiana, Michigan, Missouri, New York, Ohio, Wisconsin and many other states have enacted laws to this effect; but Kentucky is not among them. A lawyer need not divulge anything his client tells him—a priest may legally refuse to disclose what was whispered in the confessional, but the law requires a doctor to tell all. If his patient is a married man of high social position, the physician is not permitted to refuse to testify that he is suffering from a venereal disease.

I do not believe that any relationship could possibly be more sacred than that which exists between physicians and those who come to them with their griefs and burdens. There are thousands of people who confide to their doctors secrets which they would never dream of imparting either to an attorney or a minister. Yet, Section 606, (of all numbers) of the Civil Code of Kentucky, which expressly provides that the last two are privileged, is absolutely silent as to physicians.

The doctor who would spare his patient must either keep out of court or else perjure himself. It is high time that Kentucky joined her more enlightened neighbors in this respect.

### Opinions

But it is with respect to opinions that doctors play their most important role as witnesses. Few doctors are mistaken as to what they see or feel—still fewer will deliberately misstate such facts—but, in the expression of opinions, Doctors, on the witness stand, give abundant evidence that medicine is not an exact science.

The wide latitude extended to medical witnesses, with regard to the enunciation of opinions, is well described in Corpus Juris, the great general legal text-book, where the author says:

(Section 640) (14) MEDICINE AND SURGERY. A witness who is shown to the satisfaction of the court to be a competent physician, surgeon, osteopathist, or veterinary may state facts known to qualified members of his profession, as the effect, extent, and tendency of professional knowledge regarding certain matters; what ligaments a particular surgical operation severs; what are the vital parts of the body; the symptoms of a given disease or injury in body or mind, the usual period for recovery, and the chance that it will occur; what certain medical facts indicate; the effects commonly produced by age, death, disease, drugs, or intoxicants, emotions, injury, poison, or a surgical operation on the body or mind of a human being, but not effects on the moral nature; conditions of gestation; what certain symptoms indicate, or what certain medical terms cover. Definite possibilities or probabilities as to whether a certain force or other cause may produce a given physical result, or that a given disease or injury will induce other troubles, will be permanent, followed by recovery, or require a certain length of time, may be stated as facts where no especial exercise of the reasoning faculty is involved.

Moreover, it has been held in Kentucky in the case of Murphy versus Murphy, 65 S. W. 165, that a doctor, in expressing an opinion, may announce that it is based on the opinion of some other doctor, who has written a book, but, at the same time, the doctor cannot read from such book or quote its contents.

In the utmost candor, I wish to say that even if this rule respecting opinions does not open the door to a wide avenue of evasion and fraud, it nevertheless results, on many occasions in rather questionable verdicts.

Granting to all medical witnesses the utmost impartiality and the most sincere desire to assist in doing justice, it cannot be disputed that there constantly appears on the witness stand a procession of irreproachable physicians and surgeons whose testimony causes the lawyer to raise his eyebrows and scratch his head. I do not refer to the case where a doctor resolves an honest doubt in favor of the person on whose behalf he is testifying. That is not only to be expected but is a reasonable and natural attribute of human nature. Nor do I refer to the doctor who priggishly leans backward and refuses to give an opinion about anything. But there are many cases where the difference of expert medical opinion is so striking as to confuse rather than enlighten the jury.

As an example, I want to refer to an actual case, in which I participated several years ago. I select this case, out of a very large number available, first because of its unusual interest from a medical standpoint; and second because the high standing of the participating doctors precludes any possible idea of dishonesty or fraud. An examination of the testimony tends to demonstrate either that even the finest and most irreproachable doctors will give their client the benefit of the doubt, or else that the bases of medical opinions are so uncertain and so inexact as to render those opinions highly speculative and uncertain.

The case in question arose out of the claim of a widow for the death of her husband, through negligence. The husband had been a butcher in a chain grocery store. His duties required him to spend most of his time in close proximity to a refrigerator. The coils of this refrigerator became clogged and the defendant was employed to clean them out. To accomplish his purpose the defendant used about a gallon of hydrochloric acid. It may be assumed that the work was not carefully done and that a large quantity of gas escaped into the store near the place where the man was stationed. There was evidence that he complained of being sick from the fumes; and there was evidence that on the same day, in the evening, he had developed a raw and irritated throat, that the mucous membrane of his throat and nose was inflamed; and that there was a congestion in the respiratory region. Within 72 hours he was suffering from a severe follicular tonsillitis. Several days later, the man complained of pain in the abdomen, another doctor was called and a diagnosis made of acute appendicitis. The patient was removed to the hospital, where an operation revealed a ruptured appendix and peritonitis. A large enterolith was found in the appendix. Although a spinal anesthetic had been given, the patient subsequently died with septic pneumonia.

It was the plaintiff's theory that her husband's throat had been irritated by the gas; that this irritation had unduly exposed the mucous membrane to the onslaught of re-

sident germs and resulted in an infection. That the infection had been carried by the blood stream to an appendix, already latently weak; and, finally, that this chronic appendix, unable to withstand the infection, had caused the man's death.

The defendant claimed this theory to be utterly fantastic; denied that hydrochloric acid, as used in the case, was irritating, denied that there could be any relationship between an irritated throat and a bursted appendix; and insisted that if there was any contributory cause, it was the man's bad teeth.

Eleven doctors testified. They represented various branches of the profession, there were throat specialists, internists, pathologists, surgeons and diagnosticians.

As I stated a few moments ago, they were men of irreproachable standing, leaders in their respective fields and, in some instances, authorities on their subject. I want to read from the official transcript of testimony—first regarding the effects of hydrochloric acid on the throat, and respiratory organs:

Doctor No. 2. (Testifying for defendant)

"Q. In your opinion, Doctor, based on your experience with this acid and your medical experience, is or not, hydrochloric acid gas an inherently dangerous substance?

A. It is.

Q. What effect does this gas have on the mucous membrane of the nose and the throat?

A. It is extremely irritating, lowering the vitality of the parts which it attacks."

Doctor No. 2. (Testifying for defendant)

Q. Do you believe, using muriatic acid to that extent, with a pint boiling out or spilling out on a burlap sack over a period of three or four hours could have generated sufficient gas to have done anybody any harm working eight or ten feet away?

A. I think it might have caused a little irritation but as far as doing any radical harm, I don't think so.

Doctor No. 3. (Testifying for plaintiff)

Q. I will ask you, Doctor, if a gallon of hydrochloric acid in its commercial form is poured into a refrigerator coil in four applications over a period of three to four hours in a room 10 by 40 by 60, and filling that room with a heavy, dense vapor, the temperature of the room being approximately 87 degrees—whether or not in your opinion those fumes are inherently dangerous?

Objected to and the objection is overruled, to which counsel for defendant excepts.

A. In my opinion, they are.

Q. Will you tell the jury why you think they are inherently dangerous?

A. Hydrochloric acid gas is an irritant and inhaling it irritates the mucous membrane of the entire respiratory system.

Q. In your opinion, is, or not, hydrochloric acid in its commercial form a poison?

A. Yes."

Doctor No. 4. (Testifying for defendant)

A. I don't believe you could put a man in a room as large as the room described and dump a gallon of hydrochloric acid in that room and produce enough fumes to run him out.

Q. But if he stayed on the job and inhaled those fumes?

A. If strong enough they would run him out.

Q. Would it be injurious to him?

A. I doubt it; they are going out in the open and the fan was running.

Q. Suppose the room just had shelving on the sides and there wasn't any fan running, and this man was eight or ten feet from where the fumes were coming from the ice machine?

A. If the man had enough irritation he would get out himself; he wouldn't have to be invited out; he would run out.

Q. If all this gas comes to a man in divisions a little a at time—

A. It wouldn't hurt him a bit; if any came to him it was infinitesimal; if he got enough to hurt him he would get out of the way."

Doctor No. 5. (Testifying for plaintiff)

Q. Are you familiar with hydrochloric acid gas?

A. Yes.

Q. In your opinion is it, or not, dangerous?

A. It is dangerous, yes.

Q. Why do you think it is dangerous?

A. Because it is a poison which may be very irritating to the mucous membrane of the throat or of the respiratory passages, and it may also be dangerous coming in contact with the skin.

Q. Do you consider it inherently dangerous?

A. Yes, I do."

Doctor No. 6. (Testifying for defendant)

"Q. If you were to take a torch and burn the inside of somebody's throat, what effect would that have on the ability of the mucous membrane of that man's throat to resist those germs?

A. It would naturally weaken that part.

Q. Isn't that same thing true of hydrochloric acid?

A. I don't believe hydrochloric acid would burn it.

Q. You don't believe hydrochloric acid would burn a man's throat?

A. No, sir, I do not."

Now let us turn to the question of the appendix.

Doctor No. 1. (Testifying for plaintiff)

"Q. Doctor, assuming that a man has an acute infection of the throat and tonsils caused by inhaling the fumes of hydrochloric acid gas, and assuming that that man had never in his life suffered from any trouble in his stomach, his appendix, or his peritoneum, and assuming that within three days after getting this highly irritated and infected condition of his throat from these gas fumes he developed an appendicitis; in the absence of any other history, to what would you attribute this appendicitis?

A. To this infection in his throat and respiratory tract."

Doctor No. 2. (Testifying for defendant)

"Q. Assuming that this man was affected from his teeth in 1926, and he was pronounced cured by everybody that knew anything about it, and assuming that his tonsils were infected three or four days before he suffered the attack of appendicitis, wouldn't you reasonably think the acute infection of the tonsils was more likely to be related to the appendicitis than the teeth that had injured him three years before—four years before?

A. With an enterolith in the appendix?

Q. Yes?

A. No, I wouldn't think it had anything to do with it."

Doctor No. 3. (Testifying for plaintiff)

"Q. Assuming that Matthew Getson, on the 25th of July, had a severe follicular tonsilitis and an infection of the throat, and assuming that Matthew Getson, on the 28th of July, without ever having left his house, developed appendicitis, and assuming that he had never complained of appendicitis before this time, to what would you attribute his appendicitis?

A. I would attribute the appendicitis to the localized infection in his throat. It is not at all uncommon for an upper respiratory infection, either in the throat or in the chest, trachea or bronchi to produce peritonitis or appendicitis."

Doctor No. 4. (Testifying for defendant)

"Q. Would you say inhaling the fumes that came from that muriatic acid had anything to do with causing his death?

A. I think this man died of peritonitis and acute ruptured and gangrenous appendix; that is what I think he died of with the contributing cause of septic pneumonia. I don't think the gas had anything to do with it, personally, myself.

Q. From your experience, do you believe the gas could have had anything to do with it?

A. No, I don't think the gas had anything to do with it, and I have never seen a case where it did."

I have dwelt at some length on this testimony for the purpose of demonstrating the oftimes confusing effect of opinion evidence These conflicting opinions had to be considered by a jury of laymen who were entirely ignorant of the entire subject. The doctors were men whose reputation was so high as to insure their sincerity. Try to put yourself in the jury's place and figure out which version was correct.

It might be contended that the case just cited was unique because of the unusual character of the alleged injury. Experience does not substantiate this theory. Time after time, in trial after trial, there is revealed marked diversity of opinion between doctors. Almost every personal injury case which reaches our Court of Appeals necessitates a decision as to which doctor or set of doctors was correct, and which incorrect.

There is, of course, the type of injury, entirely subjective, where one man's guess is as good as another's. A splendid example is found in the sacro-iliac joint. To the observing layman it would appear that there are fashions in traumatism just as there are changes of style in hats or overcoats. At this time the most popular style in personal injuries is the sacro-iliac sprain. I first made the acquaintance of this malady in 1917 in the case of a man who fell off a bicycle. During the next ten years my office handled approximately eighteen thousand claims without ever once encountering it again.

But recently a large number of injured persons seem to have been afflicted with this injury. At present I am handling five cases involving men, women and one little girl who, according to their doctors, are suffering from a sacro-iliac strain or sprain. On the other hand, in each of these cases, doctors who examined the patient at my request are unable to find any satisfactory evidence of the condition in question. Thus, when the cases are finally tried out before a jury, we shall be confronted with an absolute contrariety of opinion. The one doctor will testify that the plaintiff is suffering from a sacro-iliac sprain—that this condition does not yield readily to treatment—that it is very painful, and it is impossible to say, with any degree of accuracy, when, if ever, it will disappear. The other doctor will testify that he found no evidence of a sacro-iliac strain, but will admit that it is something you can't detect with any of the five senses. You can't see it, hear it, feel it, taste it, or even smell it.

Please do not misunderstand. I am assuming the utmost sincerity on the part of both doctors. I realize that the attending physician is more or less bound to rely upon the honesty of his patient and to accept as real the outcries and flinchings which attend

his examinations, whereas the examining physician is suspicious in advance and is prone to accept the audible manifestations of pain with the proverbial grain of salt. But if the attending physician is largely at the mercy of his patient, the defendant's attorney is largely at the mercy of the attending physician.

Another popular subject for contemporary medical testimony is teeth and tonsils. This is much more popular with the examining physician than with the attending physician. The latter rarely testifies that his patient has bad teeth or bad tonsils. The examining doctor nearly always finds something wrong with one or both. As a result, in suits for personal injury, there is a noticeable tendency of late to attribute disability to arthritis and to attribute the arthritis to infected teeth or tonsils. Again we find the plaintiff's doctor asserting that bony changes revealed by x-ray are traumatic, while the defendant's doctor attributes them to chronic arthritis antedating the injury and primarily due to a focal infection unconnected with traumatism. And again the jury is obliged to choose between two versions, both of which, from the viewpoint of the average juror, are as unintelligible as Aramaic.

I do not doubt that the x-ray and the microscope and the other comparatively modern advances in medicine have done much to eliminate uncertainty and confusion in diagnosis; but they can scarcely be said to have the same effect in assisting juries to determine the nature and extent of a plaintiff's injuries.

It is unnecessary for me to remind you that in your profession, as in mine—and every other, for that matter—there are certain individuals who are faithless to the ideals and the ethics of their calling. There are physicians in every community whose very names fill the hearts of insurance adjusters with terror, there are others who are anathema to damage suit lawyers. The former always find something wrong with the plaintiff, the latter never find anything wrong with him. Neither has any place in this discussion, because it is impossible to formulate any code or work out any equitable program with respect to persons who won't play the game according to the rules. I think the community of Louisville is fortunate in the scarcity of such men, and I am certain that none of the small group of exceptions has attained any position of eminence or distinction either in his profession or in the wider circles of society.

It is with the average, the rank and file of sincere medical witnesses that I am concerned tonight. For to one who has closely observed the character of medical testimony and its effect on the adjudication of civil rights, it is apparent that the situation leaves much to be desired. Taking money from one man and giving it to another is a very serious business—and this is true, although what I call one man may, in reality be a liability insurance company. For while the insurance company may advance the money to pay a verdict, sooner or later that money is refunded to the company by the insuring public in the form of increased rates. Every doctor who drives an automobile bears a certain portion of every large verdict which his company has to pay. Every doctor who carries accident and health insurance contributes ultimately to every verdict which is awarded some other policyholder in his company.

While it is possible and, I think, desirable to alter the rules of evidence in Kentucky, both as to repeating the stated history and as to excluding privileged communications, I cannot see how it would be possible to make any change in the law regarding opinions. The law permits experts of every kind and in every calling to express opinions on the witness stand; and certainly there is no expert whose opinion is based on more research and experience than that of the doctor. All I can say is that the members of your great and distinguished profession must always keep alive the realization that you possess a great, a unique power, not enjoyed by any other group or profession. There is imposed in you a great dignity and a great honor. People love you and revere you because it is your privilege to relieve human suffering and to save human life. Because of this there is imparted to your public utterances a solemnity and a degree of finality which is denied to all others.

As a member of another profession which has the good fortune to be in close and frequent contact with yours, may I express the hope that each of you, when he goes upon the witness stand, will give to that task the same intelligence, the same patience, the same meticulous care—and the same integrity which has made you the most beloved and respected of men and the most useful and necessary factors in our contemporary social life.

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**Inadvisability of Massage in New Injuries of Bones.**—Bohler considers massage and passive movements in new bone fractures and articular injuries a grave mistake. He maintains that, if a fractured joint is properly reduced and constantly kept in a suitable position until solidification, and if during this time the fractured member is used by the patient, a freely movable joint is usually the result; but, if massage and passive movements are instituted on the first day, the joint becomes stiff or loose.

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NEXT MEETING HARLAN, OCTOBER 1-4, 1934


## COUNTY SOCIETY REPORTS

**Simpson:** The Simpson County Medical Society at its regular meeting, January 9th, 1934. passed the following resolution:

Whereas on November 9th, 1933, death having taken William A. Guthrie, physician and surgeon, it is hereby resolved:

That in his departure the State has lost one of its most brilliant surgeons, the community one of its outstanding citizens and the Medical Society a loyal and most valued member.

That we, his contemporaries, shall miss daily his counsel, his unfailing courtesy, surgical judgment and his supreme faith in the tenets of the profession which we follow.

It is further resolved that a copy of these resolutions be placed on the minutes of the Society, that one be furnished the family and that additional copies be submitted to the Franklin Favorite and Kentucky State Medical Journal for publication.

Committee
E. K. LAMB,
W. L. VICKERS,
N. C. WITT.

**Mason:** A special meeting of the Mason County Medical Society, called by the president thereof, Wednesday, February 7, 1934, for the purpose of considering the bill of Senator F. A. Harrison, from Grant County, which seems to repeal the law now existing under which the undertaker is a preferred creditor of a decedent's estate, and to elect new officers. The minutes are as follows:—

The meeting was called to order by the President at nine o'clock, P. M., with the following members present: A. R. Quigley, N. D. Colvin, W. G. Phillips, A. R. Carrigan, C. V. Stark, H. N. Parker, A. O. Taylor, W. E. Hord and Allen F. Murphy.

The information that the Hon. F. A. Harrison, Senator from Grant County, is sponsoring a bill to be presented to the Senate that seems to repeal the law now existing making the undertaker a prefered creditor of a decedent's estate, was received from Counselor Shaw, and a telegram was read with the wording of a resolution adopted by another society. By regular motion all present voting "aye," the secretary was instructed to draw a resolution and send a letter and copy of the resolution to Representative D. B. Coughlin, Senator Allie Young and Senator F. A. Harrison, and sign the names of all persons present at this time.

Said resolution is as follows:

Resolved, That we, the Mason County Medical Society whole-heartedly endorse Hon. F. A Harrison's bill in the senate which will repeal the present law making the undertaker a preferred creditor of a decedent's estate.

Be It Further Resolved, That we inform

Senators F. A. Harrison and Allie Young of our willingnes and readines to do everything possible to secure the passage of this measure.

Be It Further Resolved, That our Representative, D. Bernard Coughlin, be urged to work for this bill, when it comes to the House, and wipe from the statutes of our State this unfair law.

W. G. Phillips, President,
Allen F. Murphy, Secretary,
A. R. Quigley,
N. D. Colvin,
A. R. Carrigan,
C. V. Stark,
H. N. Parker,
A. O. Taylor,
W. E. Hord.

Members present and voting in favor of this resolution.

"The following officers were elected to serve until January 1, 1935: W. E. Hord, President; H. N. Parker, Vice-President; and Allen F. Murphy, Secretary and Treasurer.

Elected for two years or to serve until January 1, 1936, Allen F. Murphy, delegate to the state meeting, M. F. Davis, alternate.

The following paid 1934 dues: W. G. Phillips, C. V. Stark, A. R. Quigley, N. D. Colvin and Allen F. Murphy.

ALLEN F. MURPHY, Secretary.

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**Bracken:** At called sesion of Bracken County Medical Society, the following officers were elected for 1934:

J. J. Carroll, Augusta, President; B. F. Workman, Brooksville, Vice-President; J. M. Stevenson, Brooksville, Secretary.

They also requested that a copy of regulations as to quarantine, particularly the length of quarantine for the various diseases, be forwarded to each doctor in county for there was a variety of opinions.

J. M. STEVENSON, Secretary.

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**Henderson:** The regular monthly meeting of the Henderson County Medical Society was held Monday evening, January 8th, 1934, at the Henderson Hospital.

The President, Dr. William V. Neel, read a very interesting paper on "The Cause and Treatment of Collapse in Infancy and Childhood."

The paper was freely discussed by the members present which included Dr. F. J. Clark, Dr. J. O. Strother, Dr. R. E. Smith, Dr. G. W. White, Dr. Peyton Ligon, Dr. W. L. O'Nan, and Dr. E. N. Powell.

Visitors present: Dr. Wm. A. Quinn, of Lexington. The Society learned with regret of the death of a former member, Dr. A. Rankin Johnson, at Lexington.

W. L. O'Nan, Secretary.

**Henderson:** The Henderson County Medical Society met in regular session on Monday evening, February 12th, 1934, with the President, Dr. William V. Neel, presiding. Meeting was held at Henderson Hospital.

Members present besides Dr. Neel, were: Drs. G. W. White, J. O. Strother, R. E. Smith, E. N. Powell, R. K. Galloway and Walter L. O'Nan.

The essayist for the evning was Dr. Robert Knox Galloway, the Whole-Time Health Officer for Henderson County. Subject: "Acute Rheumatic Fever in Childhood." Dr. Galloway handled his subject well and his paper was freely discussed by all members present.

The Society adjourned to meet again the second Monday in March, at which time Dr. Walter L. O'Nan will present a paper.

WALTER L. O'NAN, Secretary.

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**Grant:** The first meeting of the new year of the Grant County Medical Society was held at the office of the Health Department with the following members present: J. W. Abernathy, A. D. Blaine, J. D. George, C. M. Eckler, N. H. Ellis and C. A. Eckler. In the absence of our newly elected President, Dr. Mann, Dr. J. D. George, our newly elected Vice-President, presided at the meeting. The minutes of last meeting were read and approved and all communications were disposed of in a routine business manner.

In way of a business communication, Dr. N. H. Ellis from Thornton Wilcox, Civil Works Administrator, gave the following information to be read at our meeting in regard to the treatment of C. W. A. workers and their dependents.

1st. There is no allowance made by the government for medical attention to C. W. A. workers except injuries suffered while in actual performance of duty.

2nd. There is no allowance made by the government for medical attention to the dependents of a C. W. A. worker.

3rd. Requisitions or medical care for relief recepients may be issued at the discretion of the relief workers.

Now, we, as members of the Grant County Medical Society pass the following resolutions: That we will not attend C. W. A. workers unless they pay their bills for we are told and now know this to be the intention of the government.

Dr. C. M. Eckler was appointed a committee of one to investigate and act if he deems necessary for certain features now coming up in the state legislature of vital interest to the society and every doctor in this State.

There were numerous and interesting case reports, one of the good and characteristic features of this society, and I am sure the ones that didn't come were the losers. The subject of "Infant Feeding" both breast and artificial, was taken up by round table discussion. The discus-

sion was opened by Dr. C. A. Eckler, who showed why mother's milk was the feed for the baby dealing with the process, step by step and also recommending the various artificial ways of raising the youngster. He showed why it was not so much the quantity of milk taken but the growth and digestibility was the thing to observe in the infant. This was discusesd pro and con by members present.

Adjourning at a late hour to meet again the third Wednesday evening in February.

C. A. ECKLER, Secretary.

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**Jefferson:** The following is the April program of the Jefferson County Medical Society:

**April 2nd—Case Report**

Elephantiasis. Lantern Slides. D. P. Hall, M. D.

**Essay**

Fractures of the Lower Extremity; Some Newer Considerations, R. A. Giswold, M. D. and R. O. Joplin, M. D.

**April 16th—Case Report**

Cutaneous Manifestations of Lymphoblastomas, A. B. Loveman, M. D.

**Essay**

Contraception, Leon L. Solomon, M. D.

CHARLES, M. EDELEN, Secretary,

WALTER HUME, President.

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**Bourbon:** The Bourbon County Medical Society held its regular meeting at the Court House, December 21, 1933, at 7:30 P. M.

The following officers were elected for the year of 1934: President, H. M. Boxley, Millersburg; Vice-President, William Kenney, Paris; Secretary and Treasurer, W. B. Hopkins, Paris; Delegate to State Convention, J. A. Orr, Paris; Alternate Delegate, C. G. Daugherty, Paris; Censor for three years, J. C. Hart, Paris.

There being no further business the meeting adjourned.

W. B. HOPKINS, Secretary.

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**Perry:** The annual meeting of the Perry County Medical Society was held at the Yellow Lantern Tea Room at Hazard, Ky., Monday, December 11 at 7:30 P. M., with 23 doctors and 32 guests present.

The Tea Room was beautifully decorated with holly and red candles and a most delightful dinner was served.

A very interesting illustrated lecture on "Hygiene of the Eye" was given by Dr. Dwight Townes of Louisville.

The annual report, as read by the Secretary showed a membership of 34 regular, 7 associate and 1 honorary, making a total of 42 members of the Society.

Meetings have been held on the second Monday of each month. The program for the year has been carried out as outlined by the committee with eleven papers by members of the Society and three additional illustrated lectures by out of town physicians.

The program for the year 1934 was presented by the program committee. It was approved and accepted by the Society.

The following were elected officers for the coming year:

President, J. S. Gilbert; Vice-President, D. D. Carr; Secretary and Treasurer, R. L. Collins; Delegate, B. M. Brown; Censor (3 years) S. B. Snyder.

R. L. COLLINS, Secretary.

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**Muhlenberg:** The regular monthly meeting of the Muhlenberg County Medical Society was held at the Lou-Ray Hotel, Central City, January 9, 1934, with the following men present: Drs. E. L. Gates, J. H. Harralson, C. C. Wilson, Roy Osborne, G. L. Simpson and J. S. Fitzhugh.

Immediately following the usual dinner, reading and approval of minutes of the last meeting, the annual election and installation of new officers occurred. The following men were elected to the respective offices: J. H. Harralson, President; H. D. Newman, Vice-President; G. L. Simpson, Secretary-Treasurer; C. C. Wilson, Delegate to State meeting 1934; G. L. Simpson, Alternate.

After election of officers, the scientific program consisted of a paper on the subject of "Medical Ethics," by G. L. Simpson. The subject was freely and thoroughly discussed by those present.

The next regular meeting will be held at The Old Inn Hotel, Greenville, Tuesday night, February 13, at 7 P. M. A paper will be read by C. C. Wilson on the following subject: "The Doctor and His Collections."

GAITHEL L. SIMPSON, Secretary.

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**Lyon:** At our annual meeting the following officers were elected to serve for the ensuing year: D. J. Travis, President; C. P. Moseley, Vice-President; H. H. Woodson, Secretary and Treasurer.

C. P. Moseley was selected as delegate to the State Medical meeting and D. J. Travis, alternate.

Our regular meeting dates are set for first Tuesday of each month.

H. H. WOODSON, Secretary.

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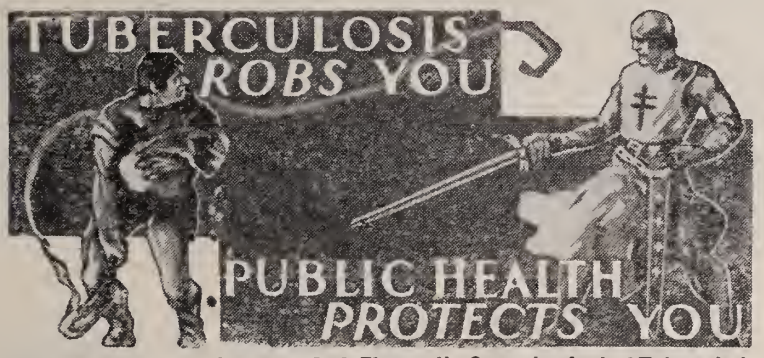
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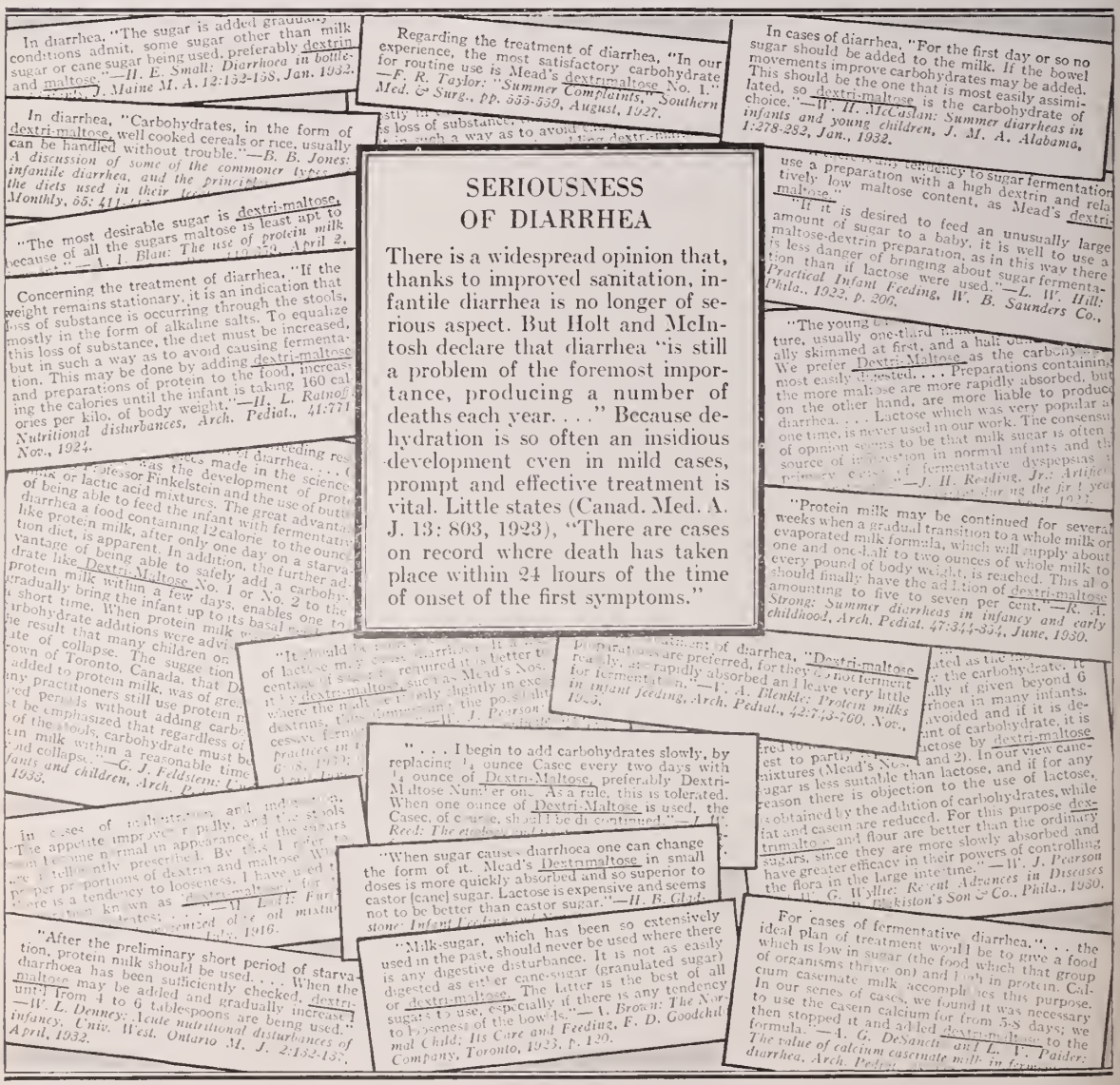
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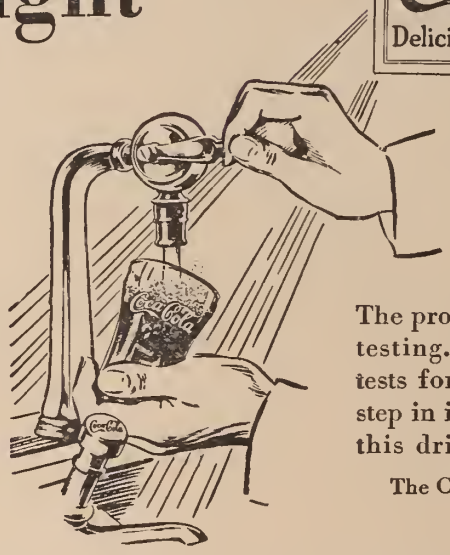
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|---|---|---|---|
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| Allen | A. O. Miller | Petroleum | May 23 |
| Anderson | J. B. Lyen | Lawrenceburg | May 7 |
| Ballard | F. H. Russell | Wickliffe | May — |
| Barren | Paul S. York | Glasgow | May 16 |
| Bath | H. S. Gilmore | Owingsville | May 14 |
| Bell | O. P. Nuckols | Pineville | May 11 |
| Boone | R. E. Ryle | Walton | May 16 |
| Bourbon | W. B. Hopkins | Paris | May 17 |
| Boyd | R. G. Culley | Ashland | May 1 |
| Boyle | P. C. Sanders | Danville | May 8 |
| Bracken | J. M. Stevenson | Brooksville | May 7 |
| Breathitt | O. M. Goodloe | Jackson | May 15 |
| Breckinridge | J. E. Kincheloe | Hardinsburg | May — |
| Bullitt | S. H. Ridgeway | Shepherdsville | May — |
| Butler | G. E. Embry | Morgantown | May 2 |
| Caldwell | W. L. Cash | Princeton | May 1 |
| Calloway | A. F. Russell | Murray | May 3 |
| Campbell-Kenton | Luther Bach | Bellevue | May 3-17 |
| Carlisle | G. W. Payne | Bardwell | May 1 |
| Carroll | J. M. Ryan | Carrollton | May — |
| Carter | R. G. Townsend | Grayson | May 8 |
| Casey | Wm. J. Sweeney | Liberty | May 24 |
| Christian | M. A. Gilmore | Hopkinsville | May 15 |
| Clark | R. H. Scobee | Winchester | May 18 |
| Clay | J. L. Anderson | Manchester | May — |
| Clinton | S. F. Stephenson | Albany | May 19 |
| Crittendon | C. G. Moreland | Marion | May 14 |
| Cumberland | W. F. Owsley | Burkesville | May 2 |
| Daviess | A. Thorpe | Owensboro | May 8-22 |
| Elliott | | | May — |
| Estill | Walter Cox | Irvine | May 9 |
| Fayette | John Harvey | Lexington | May 15 |
| Fleming | J. B. O'Bannon | Flemingsburg | May 9 |
| Floyd | E. E. Martin | Allen | May 11 |
| Franklin | W. S. Snyder, Jr. | Frankfort | May 3 |
| Fulton | Glynn F. Bushart | Fulton | May 9 |
| Gallatin | J. M. Stallard | Sparta | May 17 |
| Garrard | B. Earl Caywood | Lancaster | May 17 |
| Grant | C. A. Eckler | Dry Ridge | May 16 |
| Graves | H. H. Hunt | Mayfield | May 1 |
| Grayson | R. F. Porter | Middlesboro | May 31 |
| Green | S. J. Simmons | Greensburg | May 7 |
| Greenup | Carl M. Gambill | Greenup | May 11 |
| Hancock | F. M. Griffin | Hawesville | May 7 |
| Hardin | D. E. McClure | Elizabethtown | May 10 |
| Harlan | Clark Bailey | Harlan | May 26 |
| Harrison | W. B. Moore | Cynthiana | May 7 |
| Hart | S. F. Richardson | Munfordville | May 1 |
| Henderson | Walter O'Nan | Henderson | May 14 28 |
| Henry | Owen Carroll | New Castle | May 25 |
| Hickman | Chas. Hunt | Clinton | May 3 |
| Hopkins | David L. Salman | Madisonville | May 3 |
| Jackson | | | May 5 |
| Jefferson | Chas. M. Edelen | Louisville | May 7-21 |
| Jessamine | J. A. VanArsdall | Nicholasville | May 24 |
| Johnson | P. B. Hall | Paintsville | May 12 |
| Knott | M. F. Kelley | Hindman | May 26 |
| Knox | F. R. Burton | Barbourville | May 25 |
| Larue | D. W. Gaddie | Hodgenville | May — |
| Laurel | Oscar D. Brock | London | May 9 |
| Lawrence | L. S. Hayes | Louisa | May 21 |
| Lee | A. B. Hoskins | Beattyville | May 12 |
| Leslie | John H. Kooser, Acting Secretary | Hyden | May — |
| Letcher | R. Dow Collins | Whitesburg | May 29 |
| Lewis | J. D. Liles | Vanceburg | May 21 |
| Lincoln | Lewis J. Jones | Houstonville | May 18 |
| Livingston | Wm. C. Davis | Salem | May — |
| Logan | Walter Byrne, Jr. | Russellville | |
| Lyon | H. H. Woodson | Eddyville | May 1 |
| McCracken | Leon Higdon | Paducah | May 9-16 |
| McCreary | R. M. Smith | Stearns | May 7 |
| McLean | W. W. Spicer | Calhoun | May 10 |
| Madison | Hugh Mahaffey | Richmond | May 17 |

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| Marion | W. C. Griffey | Lebanon | May | — |
| Marshall | S. L. Henson | Benton | May | 16 |
| Mason | Allen F. Murphy | Maysville | May | 9 |
| Meade | A. A. Baxter | Brandenburg | May | 24 |
| Menifee | E. T. Riley | Frenchburg | May | — |
| Mercer | J. Tom Price | Harrodsburg | May | 8 |
| Metcalfe | P. W. Bushong, Acting Secretary | Edmonton | May | — |
| Monroe | Geo. E. Bushong | Tompkinsville | May | — |
| Montgomery | D. H. Bush | Mt. Sterling | May | 8 |
| Morgan | W. H. Wheeler, Acting Secretary | Betsy Sayne | May | — |
| Muhlenberg | G. L. Simpson | Greenville | May | 8 |
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| Nicholas | T. P. Scott | Carlisle | May | 21 |
| Ohio | Oscar Allen | McHenry | May | 2 |
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| Owen | K. S. McBee | Owenton | May | 3 |
| Owsley | D. E. Wilder | Booneville | May | 7 |
| Pendleton | W. A. McKenney | Falmouth | May | 9 |
| Perry | R. L. Collins | Hazard | May | 14 |
| Pike | M. D. Flanary | Pikeville | May | 7 |
| Powell | I. W. Johnson | Stanton | May | 7 |
| Pulaski | M. C. Spradlin | Somerset | May | 10 |
| Robertson | | | May | 21 |
| Rockcastle | Lee Chestnut | Mount Vernon | May | — |
| Rowan | G. C. Nickell | Morehead | May | 22 |
| Russell | J. B. Scholl | Jabez | May | 14 |
| Scott | F. W. Wilt | Georgetown | May | 3 |
| Shelby | W. E. Morris | Shelbyville | May | 17 |
| Simpson | N. C. Witt | Franklin | May | 8 |
| Spencer | | | May | — |
| Taylor | W. B. Atkinson | Campbellsville | May | 10 |
| Todd | B. E. Boone, Jr. | Elkton | May | 2 |
| Trigg | H. L. Wallace | Cadiz | May | 30 |
| Trimble | | | May | 30 |
| Union | D. C. Donan | Morganfield | | |
| Warren | Hal Neal | Bowling Green | May | 9 |
| Washington | J. H. Hopper | Willisburg | May | 16 |
| Wayne | R. E. Teague | Monticello | May | 3 |
| Webster | C. M. Smith | Dixon | May | 25 |
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# ANNOUNCEMENT

## *Annual Intensive Post-Graduate Course For Doctors of Medicine*

## Indiana University School of Medicine Announces the Holding of Its Post-Graduate Course from May 21 to June 2, 1934

The first week is intensive, including a series of lectures, clinics and demonstrations, stressing diagnosis and newer methods of treatment. Symposia will be held on clinical disease entities and on symptoms.

A feature of the course will be the study of pertinent aphorisms.

Alumni Homecoming Day will be one of the special attractions.

Evening programs will consist of addresses by nationally known physicians from other states.

Discussions will be held on the subject of economics as it pertains to the practice of medicine.

A second optional week will be available in any of the branches of medicine and surgery and the specialties, including ward walks, wet and dry clinics, clinical pathological conferences, round table conferences, assigned readings, special laboratory technique and topographical anatomy. The optional course will be given only in those subjects for which sufficient applications are received.

Those interested in further details regarding part or all of this course may communicate with the Registrar of the Indiana University School of Medicine, Indianapolis, Indiana, and further information will be sent. A registration fee of $5.00 will be charged.

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# KENTUCKY MEDICAL JOURNAL

BEING THE JOURNAL OF THE KENTUCKY STATE MEDICAL ASSOCIATION

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## THE HARLAN MEETING

Last year a large group of Louisville and Eastern Kentucky physicians had the opportunity of becoming familiar with Western Kentucky, through their trip to the Annual Meeting of the Association at Murray. Those of us from Louisville, the Blue Grass and the Mountains, feel a deeper interest in the welfare of Kentucky because we know more of its extent and its resources.

This year the Association is to offer its members a real sight-seeing trip. The Annual Meeting will be held October 1-4, inclusive, at Harlan. The drive to Harlan is one of the most beautiful in the State. From the time one leaves the Blue Grass, he is on the old Wilderness Trail until he has driven through Pineville. From there, he is traveling along the windings of the upper ridges of the Cumberland, on one of the most beautiful concrete roads in the State. Visitors from the Blue Grass and Western Kentucky will want either to go to or to return from Harlan by way of historic Pine Mountain, with its incomparable scenery, through Whitesburg, Hazard, Jackson, Campton, Clay City and Winchester. Beautiful sidetrips to Hindman and to Hyden may be made in an hour over perfect roads. Many members will want to see the settlement school at Wooton, the hospital of The Frontier Nursing Service at Hyden, and the settlement school at Hindman.

The usual program will be arranged so as to provide a post-graduate course in modern medicine, under the able leadership of Doctor James H. Pritchett. The combination of a meeting of the State Medical Association and an opportunity to see the best coal fields and natural resources of the Eastern section of Kentucky in the early fall should furnish an irresistable attraction.

In addition to the splendid highways leading to Harlan, special sleepers from Louisville, Covington and Lexington, over the Louisville and Nashville Railway, will be available. The profession of Harlan has assurances from its two hotels that rooms will be ready for four hundred guests, limited to the parties accompanying our membership and our Auxiliary.

We are printing this early notice so that as many as possible of our members in various parts of Kentucky may be making their arrangements for the trip to Harlan and through the beautiful mountains of Eastern Kentucky.

## CONCERNING THE PROGRAM

To: Every Doctor in Kentucky.
From: Program Committee.
Subject: The Harlan Program.

I. Please consider this a personal letter. You are invited, requested and urged to write us at once your suggestions, wishes and constructive criticism, if any, relative to the Harlan meeting.

II. We ask the Presidents or Secretaries of the various County Societies to bring this matter before their Societies, with a view to ascertaining what topics or subjects they would like; also, what members of their Societies would give us papers or would be willing to discuss papers. We hope to make the 1934 Session an All-Kentucky one, that is, have all sections of the State represented. Let no one say, "Our section of the State was slighted." Please be prompt in your response.

III. Our guest speaker will be announced shortly. To date, many letters, agreeing to present papers, have been received, and we want your help and co-operation.

IV. We expect to have a great meeting, in a great town. Our hosts of Harlan promise us a royal reception. Their slogan is: "Harlan ham, fried chicken, let's have another cup of coffee and a second piece of pie."

J. H. PRITCHETT, M. D., Chairman,
Program Committee

## THE MEDICAL PHASE OF INSURANCE

The following editorial from the Medical Times and Long Island Medical Journal by Thomas A. McGoldrick, M. D., will be of interest to our readers:

Many years ago the relation of doctors to the business of insurance was very slight. Insurance was not as universal as now. The kinds of insurance policies have increased; the many advantages have been grasped by more people and the necessity for the doctor to know several facts connected with insurance is apparent. Formerly he had to complete a simple form of proof of death. In addition to that he must now be prepared to complete forms for disability resulting from sickness or accident, to give opinion on the

permaneney of the disability and on its degree, and to issue papers required under Workmen's Compensation Insurance.

In their efforts to protect themselves and the policy holders from fraud the insurance carriers have required medical forms to be completed which in many instances have become burdensome to the physician and unjust to the insured. The number of questions to be answered by the doctor on some papers reaches over fifty. The questions themselves include those inquiring the causes of death, how long those causes were operative, from what other ailments the deceased had ever suffered, the condition of health of the other members of the patient's family, the former habits of sobriety of the deceased, the medical college and year of graduation of the doctor and other questions. In addition the doctor is usually required to make affidavit to the truthfulness of his statements and if it were a hospital death he is often asked to permit some layman of the insurance company to examine the insured's clinical records, x-ray plates and other laboratory reports. To forms are appended the statements that non-compliance with the companies' requests will retard and may prevent payment and that all expenses must be paid by the beneficiaries.

Of late the profession has learned more of its exact responsibilities in these death claims. This journal and others have recently stated on authority that doctors are not compelled to answer all these questions. They are obliged by right and by law to give information of proof of death, and usually all that information is contained in the official death certificate. Not even a doctor or a hospital may give the records of the deceased to any person. The fact that some beneficiary signs an order to permit the agents of an insurance company to examine hospital records does not excuse a doctor or a hospital from the charge of violating his or its professional relationship with a patient. The municipal hospitals and others are even today disregarding the law in this respect and leaving themselves amenable to punishment or at least to unfavorable criticism. Only the Courts of Law may have the records, and then only when brought into a court on subpoena.

The relationship, extent and permaneney of disability from accident or sickness increase the duties of the doctors. The phraseology of insurance forms is too obscure for many doctors as well as laymen, and printed in very fine type it is often not carefully read. When is a person "totally and permanently disabled?" When is he so disabled that he is "unfit to engage in any kind of work"? Fortunately within the past few years the courts of this country have given many decisions defining the meaning of these terms in insurance policies. These terms do not mean that the individual must be wholly helpless. "They should not be construed literally but reasonably and practically. Although able to perform some parts of an occupation he may be held to be totally disabled unless he is able to perform the substantial and material part of some gainful work or occupation with reasonable continuity."

It is of great interest to learn how "reasonably and practically" very many courts have construed the terms of policies. A Kansas Court has ruled that the word *immediately* in the phrase "immediately, continuously and wholly disabled after injury" is not synonymous with "instantly," "at once" or "without delay" but means disability following from "an accidental hurt within such time as the processes of nature consume in bringing the person affected to a state of total incapacity to prosecute *every kind of business pertaining to his occupation.*"

In a case before the United States Circuit Court of Appeals the beneficiaries of the deceased had been refused by the insurance company the double indemnity for accidental death. The death had been caused by the swallowing, by mistake, of sodium fluoride in place of Epsom Salt. The accident policy required that death be caused solely by external injury and that the cause of death be evidenced by a "visible contusion or wound on the exterior of the body." The Court of Appeals, confirming the lower court, ruled that the individual "died as a direct result of bodily injury effected solely through external and violent means." It stated further that evidence of visible wound on the exterior of the body was proven.

The degree and duration of disability may be more definitely appraised by the physician after careful study and consideration of medical authorities on the subject. Cooperating with honest insurance adjusters he will be able to prevent injustice to the patient and protect companies from fraud and deceit.

To sanction the acceptance by the patient of a lump sum of money for a disability the probable duration of which has not been very carefully considered is fraught with unfairness.

Many of the cases have been brought into courts in good faith. Others, it is feared, have been actions initiated to defraud, to intimidate, or to secure compromises. All companies are not of equal financial responsibility or character. For his own sake a doctor should know the standing of the companies that solicit his business for any kind

of insurance, whether for life, disability, fire damage or personal liability. A company which is not recognized by this State or Kentucky should be very carefully studied or avoided. Many of the County Societies and State Associations from their experiences and through their legal counsel have gathered much information on many kinds of insurance and are qualified to give valuable assistance to doctors seeking it.

## USE OF CONVALESCENT MEASLES SERUM OR WHOLE BLOOD

After two years of comparatively low prevalence, measles has appeared with marked intensity throughout the state. For the first three months of 1933, 643 cases of measles were officially reported to the State Board of Health; during the corresponding period of 1934, 3,797 cases were reported.

A study of our morbidity and mortality records show that about 70 per cent of measles cases and upwards of 90 per cent of all deaths from this disease occur in children under 5 years of age. In view of these facts, the importance of preventing or modifying the disease in this age group becomes all too apparent.

Experience has conclusively demonstrated the value of convalescent measles serum or whole blood in preventing or modifying an attack of measles. Generally speaking, convalescent measles serum, injected intramuscularly within five days after exposure, will, in most instances, prevent measles if given in suitable dosage. The day of exposure is estimated by considering the day of the appearance of the rash as the fourth day of the disease. The dosage may be summarized as follows: In a child of 4 years or under, 5cc of serum should be injected intramuscularly; in older children about 2cc more of serum should be given for each additional year; in children over 6 years of age, the dose should be at least 10cc. The passive immunity produced by this early administration of convalescent measles serum will last upwards of 2 months.

Convalescent measles serum given between the fifth and eighth day after exposure will not prevent the disease, but, in a majority of cases may be depended upon so to modify the attack as to render it milder in every respect and to insure avoidance of complications. Many physicians and health officers prefer merely to modify the attack of measles, thus preventing complications and, at the same time, producing a lasting immunity to the disease by virtue of this mild attack.

Whole blood from convalescent patients may be utilized instead of the serum. This may be administered as soon as drawn, but about twice the amount of whole blood is required as of serum In the event that serum or whole blood from convalescent measles patients is not available, blood from adults, especially parents who give a history of having had measles, may be used. This, however, must be given in still larger doses—30cc to 40cc. Observers who have used blood obtained from one or both of the parents who have had measles, no matter how remote in the past, state that the results obtained are about the same as those which the literature on this subject ascribes to convalescent serum.

The injections are given into large muscle masses, such as those in the buttock or the outer side of the thigh. There is no special technic, except that aseptic precautions must be observed closely. If whole blood is injected, the injection should be made immediately on withdrawal of the blood, before coagulation takes place, or else the blood must be citrated by the addition of one per cent of sodium citrate. There is some advantage in pooling the blood of parents.

There is no evidence to indicate any value from convalescent measles serum or whole blood used therapeutically.

## MOTHER'S DAY

Mother's Day, May 13th, will cease to be a mere formality of writing a letter or wearing a white carnation if the Maternity Center Association of New York City can make a dream a realization. This year Women's Clubs, Men's Clubs and County Medical Societies will be asked to join in a community effort to "make Motherhood safe For Mothers." Suggested Programs for group meetings may be obtained without cost by addressing the JOURNAL.

## VANDERBILT'S SUMMER SCHOOL IN PUBLIC HEALTH

Vanderbilt University will give its postgraduate course in public health during the coming summer. Beginning June 18th, it will cover twelve weeks. It is open to qualified physicians who expect to enter public health, as well as to health officers who desire to review the latest developments in public health practice. This course is given in cooperation with the Tennessee State Department of Public Health.

The registration fee for the session is ten dollars. The class will be limited to ten.

Those interested should write to Doctor Henry E. Mcleney, Vanderbilt University School of Medicine, Nashville, Tennessee.

## ORIGINAL ARTICLES

# MANAGEMENT OF INCOMPLETE ABORTION*

THOS. K. VAN ZANDT, M. D.

Louisville.

It is a fact that half of the child-bearing women have one or more abortions before the age of thirty-five and that one in every four or five pregnancies end in disaster before the end of the third month. It is also a fact that no definite routine procedure has been accepted as authenic for the treatment of abortion. Fortunately, the dangers of the indiscriminate use of the curette are now realized. There is an increasing trend toward conservatism, although the radicals still believe they are right.

In its strict obstetrical sense, the term abortion applies to the termination of pregnancy before the sixteenth week. The only type of abortion requiring discussion as to treatment is the recent incomplete abortion. Incomplete abortion means that the process has started, but that the uterus is not entirely rid of its contents. Incomplete abortion is a dangerous condition because of its immediate and remote bad sequelae. It should be treated as an open wound and given the same care and consideration.

The initial fear of abortion is the fear of hemorrhage and it is because of this that so many active measures are taken. The routine use of pituitrin, ergot, vaginal and even uterine packing, intra-uterine douches, curettage, etc., are all introduced to offset the risk of immediate hemorrhage or subsequent infection. We are convinced that all abortions, criminal or otherwise, are potentially infected; that bacteria are always present to a greater or lesser degree in all cases of incomplete abortion. It is difficult to conceive of an "aseptic" abortion, even though there be no fever or other evidences of septic intoxication.

A correct diagnosis of the condition presenting, although extremely important, is often most difficult. The facts offered by the patient are too often unreliable. It is frequently impossible, especially in very early abortion, to decide whether the abortion has actually been completed. Until this question is settled, the expectant plan of treatment should be carried out, unless alarming hemorrhage necessitates more active measures. Hillis advocates a delay of five days from the beginning of the symptoms before the institution of active treatment. There are two reasons for this expectant plan. The first is that the abortion is often spontaneously completed within a reasonable time. The second is that, while the patient may have little evidence of sepsis when first seen, she may be potentially infected so that in a day or two the picture may change very decidedly. This prescribed period of five days should be left to the discretion of the physician in charge of the individual case. The whole idea in the conservative treatment is to keep infection from spreading to the cellular tissues beyond the uterine wall.

The use of pituitrin as an active aid in emptying the uterus in cases of incomplete abortion is worthy of consideration. Its value is greatest in the active stage (when most cases are seen) but it is applicable at any stage if properly administered. Even if its use is not entirely successful in emptying the uterus, at least it can do no harm and the stimulation of uterine contraction is beneficial in controlling bleeding and reducing possibilities of infection.

The ideal form of treatment of incomplete abortion is the one which assures that all placental tissue has been removed from the uterus with the least trauma possible. Any treatment that aids in making local interference unnecessary is advisable and beneficial in all cases of abortion and is particularly so in infected cases. The added risk accompanying curettage, even if it be only finger curettage, comes far more from trauma than from risk of carrying in infection. Any intra-uterine or intra-cervical manipulation is dangerous in that it may break down the protective leucocytic barrier that inhibits the migration of infective bacteria or their toxins. The trauma to the uterine wall from packing, even vaginal packing, is very real and should be avoided. Emergency hemorrhage is, of course, another matter. The use of the curette in recent abortions is to be absolutely condemned. Not only is it uncertain whether the entire uterine cavity has been explored but also, owing to the softness of the uterus, perforation is extremely liable to occur.

The big question in the individual case relates to the advisability or inadvisability of emptying the uterus; when to operate if operation is considered best, and what method of emptying the uterus to employ. Most radical changes within the past ten or fifteen years have occurred in the management of cases of incomplete abortion. Formerly, the mere presence of retained tissue within the uterus, whether or not there was fever, and whether or not there was bleeding, was quite generally looked upon as sufficient indication for invading the uterine cavity, even by forcible means if necessary. This practice has not been universally abandoned.

Some operators attempt to clean out the uterus only when the streptococcus is absent from the smears and cultures, but experience has shown that it is impossible to rely upon

*Read before the Kentucky State Medical Association, at Murray, September 11-14, 1933.

the laboratory findings.

We are forced to decide if there is anything in the uterus. In cases of doubt we leave the uterus alone until unmistakable evidences of retained tissue become apparent. A careful bimanual examination is made in every case as a routine practice before operating. Extra-uterine pregnancy must always be thought of, because it is often confusing in the diagnosis. It is surprising how often extra-uterine pregnancy has been mistaken for incomplete abortion and visa versa.

If the cervix is closed and rigid, vaginal anterior hysterotomy is much safer than a forcible cervical dilatation. In therapeutic abortion there is very little argument left in favor of the cervical route. A curettage must be done through one of the most constantly infected areas of the body and one is never quite secure as to whether the patient is infected until several days following this "unsurgical" procedure.

We are strongly in favor of abdominal hysterotomy. Opening the uterine fundus prior to viability of the child has been done for years and we know today that it is recommended the world over by progressive obstetricians. In preparation for hysterotomy one can much more positively disinfect the skin of the abdomen than the vaginal field.

Opening the uterine fundus early in pregnancy incurs but a very slight blood loss and a few sutures close the uterine wound securely. The uterine contents are removed by sight, leaving no doubt as to whether there is any tissue left behind. The curette is not necessary. The gloved finger, possibly covered with sterile gauze, is the only instrument needed inside the uterus at this operation. The cervical canal is not and should not be disturbed and infection is reduced practically to zero. A later operation will not be necessary and recovery is prompt. Fundamental principles of antisepsis, conservation of blood, complete operation by sight are all enhanced by hysterotomy as against the vaginal route in the management of incomplete abortion. In the event of a hopeless uterine infection, the interests of the patient will be vastly conserved by a hysterectomy. It has been our observation that infection under these circumstances more frequently extends through the uterine wall into the broad ligament rather than through the lumen of the fallopian tubes.

## DISCUSSION

**W. O. Johnson,** Louisville: The subject of abortion is one most of us talk little about, but it is a problem we are compelled to face, so by facing the subject squarely we may reduce the unsatisfactory results and may help solve the problem.

With the permission of Dr. Chas. W. Hibbitt, I would like to give you some of the findings in abortion cases that we see in the Louisville City Hospital. In the past five years, there was an average of two hundred abortions entering the hospital each year, or ten percent of all admissions were abortions. The cases have an average of eight days duration of symptoms before entering the hospital, and practically all are incomplete or inevitable. Twenty-five per cent are criminally induced, and in about 22 per cent of these, there is a temperature of 100 degrees or over at the time of admission. In cases of spontaneous abortion, I feel that it is our duty to those patients having repeated abortions from unknown causes to find, if possible, the cause so that these women may have normal children, or be relieved of the possibility of infection from repeated abortions.

We find that 26 per cent of abortions occur between the ages of 13 and 20, 48 percent between 20 and 30 years of age, and 26 per cent after thirty years of age. Sixty-eight per cent of abortions occurring in white women occur between the ages of 13 and 20, and the highest percentage of these are criminally induced. In the past few years of depression, there has been 8.6 per cent increase in abortions in women from 20 to 30 years of age, who have previously had normal children.

All of these abortions were treated very conservatively. The patient was put to bed with ice cap over the abdomen, with head of the bed elevated to facilitate drainage, and in cases that are active, the patient is given a half c. c. of Pituitrin every hour for four doses, followed by a dram of fluid Ergot every four hours for six doses. Patient is kept comfortable, bowels cared for by enemata, and she is given ample amount of water, and easily digested foods. After the above regime has been tried out, it is necessary to evacuate the retained membranes in only 10 per cent of abortions admitted. This dilatation and evacuation is done only after the patient has had a normal temperature for at least three days, and yet continues to bleed. In severe cases of bleeding, where drugs do not check the bleeding and temperature is still present, the vagina is packed tightly and Pituitrin routine continued, and patient is not allowed out of bed until four days after the bleeding has ceased and the temperature has subsided. The mortality in these cases is .6 of 1 per cent.

In cases of abortions in the home, I feel that the conservative attitude and modification of the above regime is applicable and capable of giving comparable results. Education as to the danger of abortions, the clearing up of the causes of spontaneous abortions, and the proper maternal health instructions given to women, these unsatisfactory results and sequelae following abortions can be greatly improved.

I certainly have been greatly benefitted by Dr. Van Zandt's paper.

**A. D. Willmoth,** Liuisville: It was said yes-

terday that when doctors agreed progress wept. I am quite sure progress is not weeping this morning and will be in hilarity hall by noon, because we certainly have not agreed. I am sorry to have to disagree with my fellow townsman on the radical paper that he has just read. It reminds me of the doctor who said to his mind the only way to treat cerebrospinal meningitis was by tying the common carotid artery.

Two types of cases cover those of incomplete abortion, namely, the case of the sapremic condition, and that of septicemia. In the sapremic condition you have a localized depot with pieces of placenta or membrane present which necessitate removal with some method or other, provided the uterus does not pass it out itself, which it will do in ninety-nine cases in one hundred if you will let the woman alone and give ergot and quinine in sufficient amounts. If you have to remove it, then I am very much in favor of removing it as the last speaker said, with your finger or with a pair of forceps, with the least amount of trauma. An examination should be made, with the most care that can be exercised, because of the danger of infection out into the pelvic structures.

In the other type of case, the septicemic, the infection did not go up through the uterus, and there is nothing in the uterine mucosa that you can see microscopically, but the infection went up outside the uterus, through the lymphatics, and you have a pelvic cellulitis.

My good friend from my home town objects very seriously to the dilatation of the cervix and the trauma that is necessary to get your finger into the uterus, but he waxes warm on opening the woman's abdomen and opening up the uterus. It does seem to me that if there is anything on earth that is opposed to all surgical laws it is to open a woman's abdomen, cut across infected chains of lymphatics, and take out a uterus that is infected, and then leave the infection all in the woman's pelvis. You have opened the broad ligaments, you have cut across infected lymphatic streams, you have done four hundred times more trauma than you do by dilating the cervix.

Hysterotomy was brought forward by Dr. John B. Deaver of Philadelphia and it was my pleasure to see him do his first four cases. It was never intended for abortion cases; it was intended to make a diagnosis between a soft myoma and those early cases of pregnancy. We didn't have then the Ascheim-Zondek test or the x-ray for diagnosis, and it was purely diagnostic.

**George Hendon**, Louisville: This is just a little bit out of my special territory, but I feel that Dr. Van Zandt has in mind the saving of cases in which all of the classical methods have been tried and proved unavailing. He is trying to push forward the frontiers of science to include cases that have been absolutely despaired of.

I believe Dr. Johnson mentioned that he waits until the temperature gets normal and then he cleans out the uterus. Suppose you have a temperature that continues to rise. Sometimes we have those temperatures that don't behave themselves like we think they ought to. What are you going to do then? All of you have tried both plans—what we call conservative and the radical plan. And you have lost cases on both sides. If you have done one you wish you had done the other, and if you have done the other you wish you had done the one. It is that group of cases that the essayist is seeking to preserve.

In the presence of retained placenta which is better, to dilate the cervix by force or treat expectantly. Forcible invasion opens unseen avenues to infection. It is impossible to work under the guidance of the eye. You put your finger or your curette or your forceps with gauze in the uterus. You don't know what you are leaving; you really don't know what you are bringing out, let alone what you are leaving in. I will assume therefore, that it is a very much more scientific procedure, that it is a great deal safer under asceptic precautions to open the abdomen of the woman and make an incision near the fundus of the uterus, and under the guidance of the eye and aided by modern facilities to very gently lift out of the uterus the offending material and I think, thereby, you will afford the patient the highest degree of safety possible. If you want to be conservative there is much more conservatism in this procedure than resorting to any "system" of treatment now in vogue.

**J. N. Bailey**, Paducah: If there is any one question that will evoke, in our medical societies in Paducah, an endless discussion it is this one question. From listening to several of them with which I have been very much impressed, my conclusion has been that each man is discussing the question from his viewpoint. The essayist, who delivered a very scientific paper, as elaborated on by Dr. Hendon, does very ideally under those conditions. But one of my good friends over here that I know well is called ten miles into the country to see a woman who is bleeding or running a temperature that won't behave itself and he can't get back to see her in two hours or have a trained nurse or a trained assistant to observe her. That woman's life is as near and dear and sweet to her as the woman's who is in the hospital. But she has no available hospital and no funds to get her into the hospital.

If there is any one question, in my judgment, that requires all of the skill and judgment that a doctor has it is this one, and the evidence that substantiates that statement is the diversity of opinion that is expressed, whether to curette or not a curette, whether to go on in with a little placental forceps and catch a sapremic placenta that is protruding and gradually slip it away, or whether to go in with a piece of gauze around your finger and slip it out. The condition of

the patient, the location of the patient, the possibility of rendering that woman the best service at his hand is what the doctor on the job has to consider. I don't believe there can be any one, set, definite plan or scheme devised that will cover the entire field, because of the large amount of variance in the conditions under which you have to treat your patients.

There are patients, in my judgment, such as I mentioned a while ago, that it is not safe for the doctor to leave ten miles in the country, and if he has to judge between the possibility of going away and leaving the woman to bleed to death, as I have seen them, exsanguinated from the loss of blood, or taking the chance and emptying the offending material, that is the problem he has to solve, and he has to solve it according to his patient and the conditions at hand.

**Thomas K. Van Zandt,** (in closing): Mr. President, Ladies and Gentlemen: I am rather embarrassed to find all of the gentlemen agree fundamentally with me. Because no definite routine procedure has to date been proposed for the treatment of abortion that restricts mortality to legitimate limits, I had hoped that the rather radical stand I have taken might start a real argument on this important subject.

We all agree that the ideal treatment is the one that assures all placental tissue has been harmlessly removed. In the individual case you must decide whether the uterus is empty or not. If you believe an operation is necessary, what procedure are you going to follow? If you clean out the uterus by a vaginal approach you will wish you hadn't and if you don't you will wish you had.

The reason for this paper about the management of incomplete abortion is this: We believe that both prevailing methods are incompetent. Now to those of you who decline to accept departures from established rules and adhere to the orthodox, may I suggest that you "call the role of your illustrious dead."

There are a lot of things I would like to say about this if time permitted. I feel that a subject of this sort, with so many moot points, warrants this radical idea I have advanced. You have to pick your cases, I admit that, and make a careful and conscientious selection of your patients. The obstetrician today is in better position to do more hysterotomies than ever before.

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**Nephritic Retinitis.**—The frequency of this disorder does not seem to Ehlers to be decreasing. He says that the reduced number of cases of nephritic retinitis during the years of rationing, from 1918 to 1921, might indicate that the disturbance can be influenced by diet. His fifty-six cases afford no evidence of notable improvement in prognosis. There was hypertension in the central artery in all cases, but equally high hypertension in the central artery was found without nephritic retinitis.

## OBSTETRICAL SYMPOSIUM

## THE TUBERCULOUS PREGNANT WOMAN*

J. L. Reddick, M. D.

Paducah.

After this paper was written, an article appeared in the July issue of the Illinois Medical Journal, a paper on "Tuberculosis and Pregnancy" by Fred L. Adair, M. D. and Manuel Spiegel, M. D. from the Department of Obstetrics and Gynecology, The University of Chicago and the Chicago Lying-In Hospital, read before the Chicago Medical Society, February 15th, 1933.

The opening statement of that article is so corroborative of some of my paper and my own information, that I quote it.

"There seems to be no universally settled opinion relative to the effect of pregnancy upon the tuberculous process in women, nor is there unanimity of ideas relative to the effect of tuberculosis upon pregnancy, labor and the puerperium. It seems to be well established that tuberculosis is occasionally transmitted to the fetus, but this process occurs so rarely that it constitutes a very minor obstetrical and medical problem."

I have not had a great number of obstetrical cases, running into the many thousands, as have some of the obstetricians in the large cities who do an exclusive obstetrical practice in maternity hospitals, therefore I would not pretend to be well qualified to give definite information upon such a controversial problem as the title of this paper suggests.

Realizing that the membership of this association is made up largely of physicians who do obstetrics in connection with general practice as I do, and hoping that I may hear a full and free discussion of this important subject, is my reason for having a part in this obstetric symposium.

A great many women are fortunate enough to go through the entire period of utero-gestation with scarcely an untoward symptom; some women seem to improve in general health, during pregnancy; other women however, suffer from a variety of complications from a mild, benign, "morning sickness" to a dangerous hyperemesis gravidarum, a toxaemia malignant in character, frequently ending in convulsions if not properly treated and controlled, which jeopardizes the life and future health of the individual, and taxes the conscientious thought and skill of the physician in charge. Not the least of these complications is that of the tuberculous pregnant woman, which has long been one of the moot questions in obstetrical practice and produc-

*Delivered before the Kentucky State Medical Association, at Murray, September 11, 12, 13, 14, 1933.

tive of much thought, study and discussion.

Formerly it was believed that pregnancy exerted a beneficial effect upon tuberculosis. I believe that there is frequently a general improvement in the condition of the pregnant tuberculous woman in the early months of pregnancy, provided the disease is not in an active stage, but it is often the case that towards the end of the pregnancy the disease becomes more active, the cough grows worse, the temperature goes higher and there s a general failure in the condition of the patient. This is more apt to be the case under such economic conditions as have prevailed the past few years when husbands through unemployment, financial reverses, etc., have been unable to give their wives the vital factors in the treatment of active pulmonary tuberculosis in the way of rest, fresh air, freedom from worry, domestic duties, etc., so imperatively necessitated by their disease.

There is a great contrariety of opinion among obstetrical writers and teachers in the latest and best obstetrical literature regarding the best measure of dealing with these cases; the effects of tuberculosis on the pregnant woman, the time to institute radical methods for relief and whether the disease is more serious with the primagravida or the multiparous woman. Practically all agree that when the disease is active, pregnancy is an exceedingly serious complication. The progress in active cases varies from good to bad and the delivery must be approached with caution, but the outlook in cases of latent or arrested disease is not necessarily so grave. The patient may show an apparent, and occasionally a real improvement during pregnancy, but this is frequently not maintained after delivery. The injurious effect sometimes increases during the puerperium and may reach its maximum when lactation has been established. No type of tuberculosis is immune to the influence of the disease; latent infections may be activated, quiescent lesions reactivated and active disease made more active. Please allow me to report a case which is typical in a measure, of some of the cases occurring in general practice.

Mrs. S., age 23, presented herself in my office April 1st, 1932, for consultation and treatment. She was about the beginning of the fourth month in her second pregnancy, being the mother of a strong, healthy boy three years of age. She had been the patient of one of our best physician's, one eminently capable of making a correct diagnosis and directing proper treatment in chest diseases, who had some four or five months previously made a diagnosis of pulmonary tuberculosis.

At the time I saw her she seemed to be in fair condition. No cough of any consequence, no elevation of temperature, the lesion apparently quiescent. I gave her the usual prenatal care and advice and continued to do so at frequent intervals throughout her pregnancy. About six weeks prior to the expected confinement, she began to manifest evidences of failing health and strength. She began to cough and expectorate, appetite failed and she complained severely of her stomach and food would not agree with her.

She went into labor October 6th, and her condition was such that I felt very apprehensive that she would not go through the labor. She had a normal labor and I congratulated myself on getting through as well as I did. She was delivered of a fine, healthy, well-formed boy which was immediately placed in another room and not allowed to nurse his mother.

She did well until the sixth post-partum day when she had a sudden, severe uterine hemorrhage and died in a short time.

In a staff meeting of one of our hospitals few days later, I reported this case. One of the physicians present asked me if I believed she would have had the hemorrhage if she had not had tuberculosis, which I answered in the negative, because I believe her uterus and perhaps her stomach were diseased in a like manner with her lungs. Williams, in his work on obstetrics, reports a case in Johns Hopkins Hospital where a mother had died from tuberculous peritonitis a short time after delivery, and at the autopsy the exterior of the uterus was found studded with tubercles while the interior was covered with tuberculous ulcers and caseous material. Cultures taken from the interior of the uterus during life revealed the presence of tubercle bacilli. The child however, presented no signs of the disease and was perfectly well some time later.

"For some reason there seems to be a tendency to increased blood loss and post-partum hemorrhage in tuberculous cases, which is stated by Matthews to occur in about thirteen per cent of the cases as against the ordinary incidence of two per cent."

Another physician at the staff meeting said he believed he would have pursued a different course in the management of the case: that he would have terminated the pregnancy earlier. I was not in full accord with his statement and resolved to go into a further study of the latest and best literature on the subject.

For quite a number of years there has been published in Chicago each year, by The Year Book Publishers a little volume on Obstetrics and Gynecology, edited by Joseph B. DeLee of Chicago and John Osborne Polak of Brooklyn, and since the death of Polak, by J. P. Greenhill, of Chicago. My studies have been made from the American Journal of Obstetrics and Gynecology and the volume referred

to which I have been getting each year for the past eight years and which is a summary of the most recent literature of this country as well as foreign countries, with frequent comments by the editors.

These studies show that extensive investigations have been made in large maternity hospitals by groups of obstetricians and also through questionnaires sent out. Certain individuals believe unconditionally that the uterus should be emptied; others, perhaps because of religious belief, and for other reasons, while they admit the unfavorable effect of pregnancy upon the pulmonary lesion will not consent to abortion.

It seems to be quite the general opinion that if therapeutic abortion is done it should be done before the end of the third month and under local or spinal anesthesia, that it is indicated in a very limited number of cases, and, experience has shown that abortion in the second trimester, or induction of premature labor yield, as a rule, very poor results.

Reasoning from my own experience and my studies of the literature I am constrained to believe that therapeutic abortion should seldom, if ever, be resorted to in these cases. If the pulmonary disease is mild or inactive the patient may, and probably will, go on to full term and give birth to a well developed, strong healthy child who will continue so if kept away from the mother, and the mother may get well. On the other hand, to abort the active, well-marked case will mean the loss of two lives; the loss of the child, of course, and perhaps the death from the operation, or within a short time, of the mother.

Since this paper was written I have had an opportunity of subscribing for a set of books from the publishing house of W. B. Saunders Company, on Obstetrics and Gynecology, edited by Arthur Hale Curtis, M. D., of Chicago, the contributors being a large number of the outstanding men of this country, each one reputed to be particularly adapted to write concerning the matter of his particular chapter or chapters.

This system comprises three large volumes and is the latest and perhaps the most stupendous, up to date and comprehensive work of its kind extant, and is just off the press.

The chapter on Maternal Illnesses Complicating Pregnancy was written by William S. Middleton, M. D., Wisconsin. May I quote a few brief passages regarding tuberculosis. It is stated that a total of 32,000 tuberculous women become pregnant each year in this country: that there is a wide divergence of opinions both in precept and in practice as to the proper management of these complicating conditions: that there is ample clinical evidence to support the opinion that the strain of pregnancy and of lactation add greatly to the risk of tuberculosis, and authors are quoted who stated that while admitting that pregnancy frequently leads to a breakdown in the tuberculous subject, believed that the artificial termination of pregnancy is not warranted at any stage. Other authors pointed out the great risk of therapeutic abortion to the mother, and added that two were frequently sacrificed in the forlorn hope of saving the mother.

Now, having been interested in the study and practice of obstetrics for more than half a century, with, I hope, a reasonable degree of success, under all conditions from a one room log cabin in the middle of a cornfield, the last house up the creek, in an ambulance going to a charity hospital, in a "gypsy tent" with nothing intervening between "Mother Earth" and the patient except a piece of straw matting, to a Class A hospital in a modern, well equipped delivery room, under a rigorous aseptic technique, surrounded by the abundant assistance of graduate and senior student nurses, and having made a rather critical study of the many complete and varying opinions of eminent obstetricians I am almost forced to the unqualified conclusion that few, if any, tuberculous pregnant women should be aborted.

## IMMEDIATE REPAIR OF INJURIES TO THE BIRTH CANAL*

James G. Slater and Joseph L. Molony,
Covington.

The progress of Medicine from its earliest days is well known to every student of medical history. This progress has been due: first, to the keen observation, original thinking and daring work of early and more recent workers; second,—it has been due to a more scientific understanding of the underlying principles of the medical art; and finally with a better conception of etiology and pathology came the various means of preventing disease and preventive medicine resulted with its great economic saving and increase of life's span.

Now because of the tremendous scope of modern medicine we have the specialties and among these obstetrics.

The important function of human reproduction had for years been left to nature and more or less skilled mid-wifery. It was encompassed in a slough of ignorance and incompetence sheltered by superstition. Then carried along by the general development of medicine, obstetrics gradually emerged though it is still colored with the mire of ignorance in the layman's mind.

Obstetrics even with medical men has failed

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to show progress in keeping with the other divisions of surgery. True it has adopted aseptic technique, fostered prenatal care and is employing analgesics and anaesthetics to ameliorate the pains of labor but the art of obstetrics is suffering today by the inadequate training of students and internes and by the too easy admission of these men to the care of all and any case. In view of the data presented in this paper I think the obstetrical art has suffered by the failure of even well trained men through not attempting the prevention of the manifold distresses of mothers due to what might be termed neglect of the "Fourth stage of labor." By this I mean that by inadequate repair of all injuries of the birth canal they have been adding to the numbers of the all too common post-puerperal operations and increasing the miseries of women. For all those wounded by child-birth do not find their way to the gynecologist but only those driven there through routine examination or, what is worse, by far advanced pathology.

It is not the purpose of this paper to present an ultra-radical viewpoint or to precipitate a controversy. Its purpose is rather to present for your fair consideration a pioneer work in obstetrics five years young and backed by complete records of nine hundred and seventy-two consecutive cases delivered at St Elizabeth's Hospital during the last three and one-half years by myself and associate or by house-men under our direction.

In 1927, in all my hospital cases, routine examinations were begun with a view of attempting complete repair of all lacerations: cervical, vaginal and perineal, immediately following delivery. For this work a technique had to be developed. Very soon it was found that a visual rather than a digital examination was needed for diagnosis. In this inspection, because of the relaxed condition of the perineum a vaginal speculum could not be employed. Due to the friability of the cervical tissue the ordinary tenaculae could not be used for traction. Therefore through trial by the year 1929 a routine technique had been developed and was being regularly employed. By this time, too, a sufficient number of patients had returned for examination with results so satisfactory that complete repair became our common practice.

During the past three years we have conducted the examination and repair in the following manner:

The field of operation is of course well lighted and redraped;

The anterior lip of the cervix is grasped with a sponge forceps;

An assistant then holds this while the posterior cervix is palpated and seized by a second similar forcep.

The operator then takes both these instruments in one hand and while exerting lateral traction inserts, with the other hand, a retractor held by the assistant.

This will disclose one side of the cervix for examination and if necessary for repair.

For examination of the other side the operator takes the forceps in his opposite hand and again exerting traction laterally to that side, places the retractor for assistant to hold.

These two maneuvers discover the more common types of cervical lacerations. For the less common posterior tears the forceps are placed on the posterior lip at the margins of the tear. The operator uses upward traction while the vaginal floor is depressed by means of a retractor.

The uncommon tears of the anterior lip are disclosed similarly to posterior tears except of course the instruments grasping the anterior lip draw it downward, while the vesico-vaginal septum is retracted.

Cervical lacerations, regardless of location or extent, are repaired as follows:

Any tags of devitiated tissue are trimmed away and the approximated edges are united by interrupted sutures of forty day chromic gut placed by a short round needle and beginning at angle of tear.

The sutures are tied tightly because in our experience the cervix very quickly decreases in size after delivery and since the tissue has a very rich blood supply anemia with sloughing is not anticipated.

Spacing of sutures depends in large part upon thinness and friability of the cervical tissue, demanding more or less sutures to secure approximation.

With the cervix repaired the forceps are removed and the vaginal walls are next examined and repaired, as follows:

The body of the uterus is displaced upward by a hand on the abdomen and three half-yard gauze sponges are placed in the vagina against the cervix and held there by means of a retractor placed under them and held by assistant.

The operator's fore and middle finger depressing the vaginal floor exposes the entire vagina for inspection and any needed repair.

These repairs are also made with chromic gut carried on a small round needle. The sponges and retractor are then removed.

The practice of using three sponges overcomes the danger of leaving any in the vagina.

Perineal repair is now attended to as the case requires. We use chromic gut interrupted sutures entirely, suturing in tiers: Muscle, fascia and skin.

These sutures are placed so as not to be too tight, allowing for edema and permitting free circulation of blood.

Following repair, if internal lacerations were extensive, alcohol is instilled into the vagina, both for its antiseptic effect and because the coagulation of the blood produced serves to control capillary hemorrhage and seals against infection.

Hot compresses are used to the perineum if it has been traumatized and edema is anticipated.

At present there are three schools of thought and practice regarding the repair of birth canal injuries:

One is that perineal lacerations should be repaired and deep cervical and vaginal tears should only be looked for and repaired when there is hemorrage which may be due to severance of the cervical circular artery;

A more recent advance advocates routine examination and repair of all injuries due to operative deliveries;

Our personal opinion is that routine examination and repair should follow all deliveries because we have found that by so doing, cervical and vaginal tears are discovered following spontaneous deliveries in two out of five primiparas.

In pursuing our routine technique on every case we have had the following record:

The total number of consecutive cases delivered by Dr. J. G. Slater and Associate Dr. J. T. Molony and by house physicians under their direction, at St. Elizabeth Hospital, Covington.

| | | |
|---|---|---|
| Total Cases | 972 | |
| Maternal Mortality | .61 | |
| Infant Mortality | 9.0 | uncorrected. |
| Infant Mortality | 6.0 | corrected by omission of monsters hydrocephalus, spina-bifida, atresia of intestine, congenital heart, and premature. |

| | |
|---|---|
| Maternal Deaths | 6 |
| Pulmonary Embolism three hours post-delivery | 1 |
| Septic Pneumonia in presence of septic flare up in house | 1 |
| Pyemia following breast abscess | 1 |
| Post-partum eclampsia | 1 |
| Malignant endocarditis beginning prenatally | 1 |
| Undetermined | 1 |

The high percentage of lacerations found in versions would be decreased considerably if allowance were made for those cases where, due to emergency, mechanical dilatation was done followed by version. The large number of operative deliveries in this series is accounted for by the fact that due to the location of St. Elizabeth Hospital, serving as it does a large rural district, many of the cases reported were removed to this institution only after trial of labor and were entered as difficult labors on consultation service.

In looking over the above table we note that 39 per cent of spontaneous deliveries in primiparas were accompanied by cervical lacerations while 9 per cent had vaginal tears. Should these cases be allowed to go unnoticed? Should they not, if possible, be delivered in the hospital where adequate repairs can be made?

In regard to forceps, low or mid, in primiparas and multiparas, the incidents of tears in the cervix and vagina is so large that it seems to us that all of these cases should be hospitalized so that thorough examination and adequate repairs can be made.

Of the above series of cases we have been fortunate in being able to examine about 80 per cent three months postpartum. The condition of this group has been so satisfactory, due to primary healing and the patients have been so subjectively free from symptoms that we, on our part, feel bound to continue our efforts. Then too, our colleagues doing gynecology have been so generous in their praise of the work, and so free to admit that they very seldom see a case so repaired at times of delivery needing later repair work, that we take this as indirect proof that we are getting results.

Of course the incidents of avoidable injuries to the birth canal is increased by:

1. Too rapid delivery by use of pituitrin or mechanically;
2. Edema of parts due to unwarranted delay in second stage of labor;
3. Disproportion between passenger and passage-way;
4. Nonrecognition of abnormal presentation, position, flexion and extension;
5. Rigidity of cervix due to age, pathology, operation or previous injury;

Total Cases 972

Primiparous 389 (40%)

| Type Del. | Version 12.6 | Breech 5.4 | Med. F. 27% | Low F. 7.9% | Spontaneous 47.6 |
|---|---|---|---|---|---|
| Cervical | 90.0 | 71.0 | 76.0 | 51.0 | 39.0 |
| Vaginal | 45.4 | 47.6 | 50.5 | 27.8 | 9. |
| Perineal | 61.90 | 42.7 | 62.9 | 48.7 | 35.7 |
| | | Multitiparous 583 (60%) | | | |
| Cervical | 58.7 | 29.3 | 49.0 | 55.0 | 15.1 |
| Vaginal | 3.12 | .. .... | 12.3 | 5.8 | 1.0 |
| Perineal | 18. | 17.4 | 20.4 | 41.6 | 10.1 |

6. Faulty development or traumatic alteration of pelvis.

Likewise injuries may be reduced:

1. Proper use of suitable analgesics and anesthetics to control forces of labor;

2. Early diagnosis with recognition and correction of abnormalities where possible;

3. Care when mechanically dilating the cervix;

4. Version rather than high forceps;

5. Care in introducing forceps and delivery by forceps;

6. Recognition and relief of contracting ring by deep anesthesia or adrenalin.

The case of immediate repair versus the case of secondary repair.

It has always been taught that unless signs of hemorrhage presented and the patient was in danger that no repair of the cervix was needed. They told us that to expose and examine a cervix or vagina postpartum, even under suitable conditions, was unnecessary and dangerous because it would certainly increase the morbidity and mortality of obstetrics. We are told that sutures will not hold in the cervical tissue and that suturing leads to infection and sepsis; in short the attitude has been to do as little as possible in conducting a delivery and leave any poor results for the gynecologist.

Now we know that of all patients examined postpartum by visual examination that roughly, two out of every five, will show lacerations of cervix or vagina or of both. What will happen to this forty per cent? During their lying-in period they will usually be uncomfortable and frequently will complain of tenderness in the lower abdomen; they will have more tendency to run a low-grade fever (often the result of local inflammatory changes at the site of an injury), extensive scar formation often results due to healing by second intention;—the tissues become severely retracted rendering secondary operation for repair unsatisfactory, if not impossible;—the deep scars in the cervix may in a future labor be the cause of a ruptured uterus;—ectropin of one or both cervical lips encouraging endometritis by extension of organisms from the vagina or producing cervical ulceration;—miscarriages become more common when tears of the cervix extend above the internal os;—cystocele and rectocele are frequent.

Some of these patients will never receive attention, a great number will fall into the hands of so-called "medical gynecologist" and treated and treated they pay and pay. Another great number are driven to the true gynecologist because of far advanced states of pathology.

Finally, in these days when the fight against cancer is solely dependent on the early removal of any and all of what might prove to be precancerous conditions, we are leaving in these unrepaired lacerations just such a condition. Is it not true that by far the greatest numbers of carcinomata of the cervix are found in multiparous women?

In immediate repair we are not dependent upon the accidental return of a patient for later treatment. While the patient is still on the delivery table the work is completed, painlessly for it is a simple matter to continue the delivery anesthetic. In this respect nitrous oxygen is peculiarly suitable.

By making healing by first intention possible the above long chain of unwanted results are abolished or at least curtailed. The patient saves by having one hospital and one doctor fee instead of two. The obstetrician no longer leaves a trail of cripples in his wake, needing rehabitulation. The final ideal of obstetrics is more nearly realized, namely the speedy return of a well mother to care for a well baby. Gynecology instead of treating diseases of women due to child-birth is left to treat the diseases of women.

## Summary

Analysis of the above statistics taken from 972 consecutive cases show the high incidence of injuries to the birth canal.

Complete repair of all injuries can and should be made in all cases immediately following delivery.

Results in practice prove that success of this work is adequate enough to justify its continuance and spread.

That this work offers a definite field for advance in obstetrics.

That the technique is simple enough to be regularly employed by all men qualified in obstetrical work and having their patients hospitalized.

That this work is an economic and prophylactic advantage to the patient.

That this work more properly belongs to obstetrics rather than to gynecology.

That by non-repair we render our patients liable to many conditions of minor and major pathology.

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**Thyroidectomy in Heart Failure and Angina Pectoris.**—Levine and his associates performed partial or complete removal of the normal thyroid in twelve patients suffering from the most severe forms of heart disease. There were four having angina pectoris, four having valvular heart disease and auricular fibrillation, and four having non valvular congestive heart failure. They were all hopeless cardiac cripples and, for the most part, bedridden. Improvement in six was marked. In three, it was slight to moderate. In one, there was no improvement. In one, sufficient time has not elapsed to judge.

# THE MANAGEMENT OF PUERPERAL INFECTIONS*

HARRY A. DAVIDSON, M. D.
Louisville.

Before delving into the real purpose of this paper, the treatment of puerperal infections, the writer would like to discuss certain phases of the subject which have not been made clear to the profession and laity in the past. It has been stated that a woman is safer at home than she would be if delivered in a hospital. No doubt this erroneous conclusion was drawn from the fact that most women who were seriously infected in childbirth in their homes were taken to the hospital for treatment and if death ensued the hospital was credited with the mortality.

Asepsis and antisepsis can be secured more easily in a hospital where the nurses and attendants have a trained surgical conscience, than in the home with inexperienced and ignorant help. Common sense and logical reasoning would naturally lead us to such conclusions, but certain propagandists would lead the laity to believe otherwise.

Now we have some illuminating facts and figures from the great state of Illinois which refute this erroneous belief.

State Health Director Hall in his report for the year 1930, which was a typical year, shows that there were 199 deaths from puerperal septicemia; 107 of these or 54 per cent were preceded by abortion!

The mortality rate of puerperal septicemia in Illinois among patients attended by licensed physicians was less than one death per 1,600 cases of confinement. Outside of Chicago there was a death rate of about one to three thousand cases in hospital deliveries whereas in the home deliveries the death rate was one death per twelve hundred and seventy-eight live births. From these statistics we learn that the risk of fatal child-bed fever among mothers whose babies were born in hospitals was less than one-half the risk among those who stayed at home.

The large number of deaths from post-abortive sepsis should be emphasized and if some of the lay women's journals wished to do something helpful for their sex, let them call attention to the great danger of self induced abortions and criminal abortions by midwives and doctors.

Unfortunately the controversial question of placing the blame for puerperal infections, as between midwives and physicians, has arisen. M. Thomas in the Journal Obstetrics and Gynecology of British Empire has this to say. The data suggest that in the medically attended confinements the risk of puerperal sepsis was increased and the disease was more likely to end fatally. However, it should be borne in mind that this group included all difficult and abnormal deliveries and those in which instruments were used either from choice or necessity. Moreover, at many of the confinements a doctor and midwife were present, and these included the majority of the medically attended cases. In most of these cases the woman was first examined by the midwife, the doctor being called only when a source of difficulty was discovered.

In nearly every obstetric case there is an injury, tear or abrasion of the soft parts in the presence of a mixed culture of germs. This makes practically every obstetric delivery a surgical case and the medical or midwife attendant should use all aseptic and antiseptic precautions that are used in modern abdominal surgery. In the home deliveries tincture of green soap should be used liberally on the hands of the attendant and the external organs of the obstetric patient. Rubber gloves are not expensive and are easily sterilized by boiling water in twenty minutes.

As a result of the examination of the cultures obtained from the vagina of numerous pregnant women, both primipara and multipara it is now conceded by nearly every one that the pregnant woman's vagina is not sterile but harbours a mixed culture of numerous germs. The vaginal membrane is not a mucous membrane but is more like the skin with the horny layer of epithelium absent.

We would not think of cutting through the skin on any other part of the body without preparing the skin by cleansing it and then applying some antiseptic solution. Why then should we allow the fetal head to bruise and tear the vagina, as it does in nearly all cases without making the vagina as germ free as possible. Antiseptic vaginal douches have been tried in the past and have failed, but antiseptic injections of five per cent mercurochrome or a solution of Metaphen (1-1000) will render a mixed culture of germs less virulent so that the natural defences of the body can take care of the remainder. The most virulent of the numerous germs found in puerperal infections is the streptococcus hemolyticus and since various studies and experiments seem to prove that they emanate from the upper respiratory tract of the attendants, therefore everyone present in the delivery room should wear a mask over mouth and nose. Among the various germs that have been found present in puerperal infections may be mentioned Streptococci, hemolytic and non-hemolytic, aerobic, anaerobic, facultative and obligate, many varieties.

Staphylococcus aureus, albus and citreus.

*Read before the Kentucky State Medical Association, at Murray, September 11, 12, 13, 14, 1933.

Bacillus coli, gonococcus, pneumonia bacillus, bacillus of influenza, diphtheria, tetanus, anthrax, typhoid, pyocyaneous, proteus, aerogenes capsulatis (Welch), fusiformis and spirilla and many others. Anywhere from one to fifteen different varieties of germs have been found in one case of puerperal infection.

The pathology of puerperal infection begins always as a wound infection and the ultimate outcome of the case will depend upon the variety of germs, the number of germs and the resistance of the patient. The local lesion may be a simple tear of the vulva, perineum, or upper vagina. The cervix is nearly always torn and is a favorite site for the infection. If instruments have been used or if there has been intra-uterine manipulation then the endometrium is the port of entry of the germs which are usually carried up with the gloved hand or the instruments. After the infecting organisms have been introduced through any one of the above lesions, then they travel further by either blood vessels or lymphatics, or by direct extension from the endometrium into the fallopian tubes. The pathological conditions that may result are numerous and serious. Perimetritis, peritonitis, parametritis or cellulitis, phlebitis and thrombophlebitis including phlegmasia alba dolens. When numerous germs get into the blood stream, causing bacteremia there is no limit to the extension of the pathology and nearly every organ of the body has become involved in many cases. The kidneys, the heart, the lungs, brain, meninges, joints and infrequently the liver.

Pelvic thrombophlebitis is one of the most dangerous complications and causes many sudden and tragic deaths due to embolism. The following symptoms are typical of an average case of puerperal infection. For two or three days following a difficult labor which required more assistance from the Obstetrician than usual, the patient complains of malaise and restlessness. On the third or fourth day she has a chilly sensation or a distinct chill and the temperature jumps up to one hundred and three or four degrees, the pulse is fast, one hundred ten or one hundred thirty, she complains of headache and general soreness of the body, especially the lower abdomen. The lochia may be profuse or scant, the odor strong or in many of the most severe infections there is very little odor and the discharge is scant. The blood pressure in most puerperal infections is low.

If the streptococcus of scarlet fever is suspected as the cause of infection the Schultz-Charlton test should be made and if positive would decide the specific treatment for the case. In discussing the treatment of puerperal infections we wish to emphasize some things which should not be done and stress those procedures which have been found safe and sane.

Prenatal care throughout the whole period of pregnancy should aim to build up the natural immunities by keeping all the vital organs in good condition and by providing food with all needed vitamins and chemical elements.

Localized infections in the lower genital tract should be treated and cleared up before the onset of labor. Patients should be instructed not to have intercourse during the last six weeks and vaginal self examinations should not be made during this time. Some recent favorable experiments with vaccines and antitoxic streptococcal serum seem to indicate that some time in the future we will immunize our pregnant women against infections, as we do now immunize against typhoid and diphtheria.

If after a thorough examination of the patient all other causes of infection have been excluded and a final diagnosis of puerperal infection has been made, then the patient should be segregated from other obstetrical cases and should be placed in a light airy room with a good special nurse in attendance. Liquid and semi-solid food rich in carbohydrates and proteins with an abundance of fruit juices should be given at frequent intervals to sustain the strength of the patient. A saline laxative should be given in the beginning and then the bowels kept open with enemata. To control the fever, alcohol baths should be given and not antipyretic drugs. Either an ice bag or a hot water bottle may be placed over the uterus. If the chills are severe and the pain depressing, hot drinks with a hypodermic of morphine, grain one-sixth, should be given. Drainage of the uterus and vagina should be facilitated by the Fowler position.

Early in the treatment an obstetric ampoule of pituitrin should be given hypodermatically and repeated every two or three hours for three or four doses. This should be followed by 1cc ampoule of ergot in the form of Gynergen three times daily for two or three days. Quinine, grains three, every three hours may be given by mouth. The above drugs are all given to keep the uterus contracted, expel clots and prevent the spread of infection.

Under the head of local treatment we wish to mention hot antiseptic douches, curage and curettage only to condemn them. They have been tried in the past and have been found wanting. It would be as scientific to curet the diphtheritic membrane from a child's nose and throat as to curet the infected endometrium of a puerperal patient. All the protective barriers thrown up by the human organism are torn down by the curet and the infection spread broadcast. If sutures have been

placed in the vaginal or perineal tears, they should be removed so as to furnish free drainage of infected wounds. Under the head of specific treatment may be mentioned those cases of scarlet fever infection probably due to a streptococcus hemolyticus, which react positively to the Schultz-Charlton test and respond nicely to intravenous and subcutaneous injections of scarlet fever antitoxic serum.

Puerperal infections associated with the loss of much blood are greatly benefitted by whole blood transfusion properly typed and given in small amounts three or four hundred cubic centimeters and repeated.

Various antiseptics have been tried intravenously in the past with relatively poor results, probably because they used remedies that were too strong and with which they hoped to kill all the bacteria in the blood stream.

Recently antiseptics have been used for their bacteriostatic effect instead of bactericidal, and with better results. Sol Metaphen (1-1000) in ten cubic centimeter doses intravenously to be repeated in twenty-four hours has given remarkable results in a number of cases recently reported. Surgical treatment of certain forms of puerperal infection have been resorted to with results that in the main do not compare favorably with the more conservative forms of treatment. Ligation of the pelvic veins in cases of suppurative thrombophlebitis still has adherents, but statistics on a large number of cases show as good if not better results from conservative treatment.

Pathologists consider thrombosis of the infected veins to be nature's method of curing the infection. Hysterectomy is indicated in a few cases of puerperal infection but is a dangerous procedure in the presence of acute infection. Large collections of free pus in Douglas' Cul de Sac should be drained after the acute symptoms have subsided. It seems to be a consensus of opinion throughout the world that conservative treatment of puerperal infections give better results than the surgical.

### Summary

1. It is true obstetric deliveries in hospitals in the time of Semmelweiss of Vienna, 1847, were much more dangerous than home deliveries, but the reverse is true of the modern hospitals of today.

2. The fearful mortality of puerperal infection due to abortions should be brought forcibly to the attention of the women of our land.

3. Every obstetric delivery is a surgical case and surgical asepsis and antisepsis should be practiced always.

4. Alcohol, tincture of green soap, lysol, mercurochrome and solmetaphen are a few reliable antiseptics, which if used properly will reduce both morbidity and mortality in obstetrics.

5. Curettage of the uterus should never be done in the presence of puerperal infection.

6. Conservative treatment when compared with radical surgical treatment shows better ultimate results.

### DISCUSSION

**S. P. Oldham,** Owensboro: The papers in this symposium should be very interesting to the general practitioner and the obstetrician as well. Dr. Reddick's paper, to my mind, is most outstanding in its class. Unfortunately, the minds and opinions of the most outstanding men throughout the country are at variance as regards the question of therapeutic abortion. Necessarily it sums itself up in one question to abort or not to abort the tuberculous pregnant woman.

We know that the average woman when she first conceives seems to improve in health. She seems well, she looks well, and seemingly is well, and many times it is a hard matter to determine whether or not this woman should be aborted. But as time goes on, after this patient passes from the first trimester into the second, when the baby begins to draw on the mother's reserve those things that it requires for its reproduction, when her kidneys are supposed to eliminate the toxins not only from her own body but from her baby as well, when she is called upon to store up glycogen in her liver not only for herself but for her baby as well, when she is called upon to take on oxygen and give off carbon dioxide not only for herself but for her baby also, these things become a considerable strain on the mother and, with the psychological effect of the trying ordeal through which she is soon to pass, have a tendency to reduce her resistance, and at the end of the second or the beginning of the third trimester, the woman who once looked well and felt well, who had the bloom of health on her cheek, with eyes bright and unbounded energy, begins to look haggard and worn, her resistance is lowered by this considerable strain; she begins to develop a cough and runs temperature.

Then what course will you pursue? You cannot go backward; you must go forward. This tuberculous woman will necessarily have to be given intensive pre-natal care, put to bed if possible, and given plenty of fresh air and nutritous food, hoping that you may carry her through this delivery and perhaps deliver a normal well baby.

But in a few months after the baby is born, even though lactation may have been prevented, this active condition, this tuberculous volcano which has been lying dormant in the lung for

many months, becomes active and in a few months she passes out of the scene. You have a normal, well baby, yes, but when the mother passes out of the scene it only adds to the mortality of tuberculosis.

Dr. Reddick gave this woman intensive prenatal care; he did all that anyone could do for this woman up to her delivery. She was delivered of a healthy, normal baby, but on the sixth day postpartum she developed a hemorrhage and died. To my mind this woman died not from a secondary or postpartum hemorrhage, but from a hemorrhage from a tuberculous uterus. I believe if Dr. Reddick had held an autopsy on this woman he would have found the uterus tuberculous, and the sloughing and breaking down of the tubercules was the cause of the hemorrhage of which Dr. Reddick speaks.

**John W. Scott,** Lexington: The discussion of the tuberculous pregnant woman has met with the difficulty that a moral issue has been injected into it. As we all know, many of our profession and of our patients have strong moral convictions about the interruption of pregnancy. I am not one of those who have such convictions. I have the highest regard for those who hold them; they are as honest about the matter as I am, and yet they carry an inescapable burden in reaching a conclusion, that of a conviction that they have taken in with their mother's milk. Nobody can believe from the time of his earliest thought on the subject, that the interruption of pregnancy is murder and discuss that or anything connected with or involving such an act in a judicial frame of mind. One cannot, in any procedure which involves what he considers homicide, discuss it dispassionately; one is just committed against homicide. I feel that this has interfered with discussion of the subject on its merits. I cannot appraise the effect of pregnancy on the tuberculous process. Dr. Reddick tells us that great investigators are not agreed upon it.

I do know, however, that the tuberculous pregnant woman has to face at the end of pregnancy a tremendous effort in labor, which of itself is enough to break down the average active tuberculous patient. I do know that after labor she has to have the additional burden of a baby to care for. I do know that after that the baby, while he is at birth a normal baby, is brought into an atmosphere where there is tuberculous infection. Even if the baby is taken away from the mother, quite likely the person who has infected the mother will be handling the baby, or at least in contact with it. Keeping the baby away from its normal nurse and putting it in the hands of another one may mean giving it to the one who has given the mother the infection to start with. In other words, that baby has a great risk of becoming tuberculous on account of the tuberculosis of the mother, or because of what caused the tuberculosis of the mother. So we do not have a healthy baby in that sense; we have a baby who has a much greater chance of becoming tuberculous than does the average baby.

Now, with the increase in the use of spinal anesthesia, pregnancy may be interrupted with very little damage to the mother and almost no risk of increasing the process in the mother's lung. This is a danger we do meet with when we use any form of inhalation anesthesia.

So many men have the idea that ether is deadly to the tuberculous lung, but that gas is harmless. That is a great fallacy. The tuberculous lung is not damaged by the nature of the anesthetic substance which is inhaled, but it is damaged by the hyperpnea, the tremendous increase in the respiratory effort which is incident upon the anesthesia, and that occurs upon the inhalation of nitrous oxide gas just as it does with the inhalation of ether. So I beg of you not to subject these patients to this danger when you interrupt pregnancy.

**Philip Barbour,** Louisville: I agree with Dr. Scott that there is no question as between a living mother and a possible living child,—that the mother's life should be conserved. Of course, there are those who believe from a religious point of view that the fetus is entitled to live even if the mother dies. I think it is a rather wrong attitude. The mother deserves not only her own life, because she is living, but she has other cares in her household and other children to take care of whose importance outweighs the possibility of a fetus being born and living.

I am reminded of some statistics some years ago as to the possibility of the infection of the child through the uterus in the tuberculous woman. The case of tuberculous infants or fetuses are so very rare that I think that should not enter into the discussion at all. If the child is born it will be born most probably free from the tuberculous infection. However, no mother who has tuberculosis has any business nursing her child afterwards. It is not only dangerous to the child from the contact with the mother, but there is a tremendous drain upon the mother's strength and it is almost sure death for the tuberculous mother to nurse her baby afterwards.

Dr. Reddick did not mention one point which I think is very vital in these tuberculous mothers, and that is that there is a tremendous drain upon the calcium reserve in a mother while she is carrying her child. She has to furnish not only her own calcium, but she has to furnish the calcium for the bones of the coming baby. In addition to that there is a long period, sometimes three to six weeks, or longer, of vomiting

on the part of the mother, in which case she is constantly losing her food, her food reservoirs are lowered, and the result is that the lime in that mother is very seriously reduced. If there is any demand for lime on the pregnant tuberculous mother that lime is going to come not from the bones, but from the most recent lime deposit, and that is in the calcified nodes in her lung. The consequence is that when the lime is lost the lime around these calcified tuberculous nodules is absorbed and the whole tuberculous process is opened up again.

I believe that if you are helping a tuberculous patient to carry her baby on through, you must see to it that she gets an enormous amount of lime deposited in her. During the time that she is vomiting she is getting no lime, and there is a considerable demand upon her for lime, and so her resistance is being broken down all the time.

I think even if the mother is not tuberculous she should have great quantities of milk given to her and great quantities of other types of lime-bearing foods, and in those cases that are vomiting badly I should certainly see to it that the mother has lime given to her in any way that you can administer it.

I think we should watch the calcium content of the blood in our tuberculous mothers particularly.

**G. G. Thornton,** Lebanon: One of the essayists spoke of some propagandists who claim that the woman in confinement is safer in the home than she is in the hospital, due to the fact that the statistics of the hospital of the City of Louisville (I suppose that is where the propagandist gets his argument) show a great deal more mortality than I have had in my obstetrics in the home. I would like to know who these propagandists are that are advocating this. I hold that the hospital is really a much more ideal place for the management of these cases.

Speaking of the tuberculous woman and the induction of premature labor or miscarriage for her protection, suppose we have no conscientious scruples at all about doing that, and adopt it, what is going to happen? Three or four months more and you will have that same thing to go over. My practice has been to let it go. It is a tragedy at best, and my experience has been that instead of helping the woman it has always ended in disaster to her after the baby was born. It is a tragedy any way you look at it.

In the last thirty-five years in a country practice I have delivered probably 2500 babies, I have had puerperal infection only three times, twice they recovered, once was from an adherent placenta in a premature delivery, and I never was able to get anything like all of that placenta away; we had an infection in that case which resulted in the death of the woman. I have heard very much said about adherent placenta at full-term delivery, but it has been my fortune to have had five cases. In three of my cases it resulted in death, and two recovered.

**W. O. Johnson,** Louisville: There are two things of importance that I would like to emphasize in Dr. Reddick's paper. First, in order to keep the tuberculous woman from becoming pregnant, would not it be better to give her safe contra-ceptive advice before she gets pregnant, and knowing you have a tuberculous woman, giving her safe contra-ceptive advice you will not have her returning in a few months with repeated pregnancies. If the tuberculous woman is desirous of having children, let her first get an arrest of the tuberculous condition, then I feel that she can be carried through her pregnancy. It is my belief that an active, progressive tuberculous condition in women is sufficient to warrant contra-indication to carrying through the pregnancy, and that if interruption is indicated, it should be done at an early stage of her pregnancy.

As regards the immediate repair of the birth canal, I would like to ask for Dr. Slater's technique. It has been my experience that the cervix immediately after delivery is like a sheet of paper, and is extremely distorted and elongated. A suture placed at one point, immediately after delivery, in three hours has moved one to two inches. If the tie is made tight, it will constrict the tissues, causing damage which possibly would give rise to infection. If the tie is made loose, it is not tight enough to do any good therefore its placing is unnecessary. If we examine the cervix of the primipara three weeks after delivery, we will find that 98 per cent of the patients will give evidence of having cervical tears. I think the indication for immediate repair of the cervix following delivery is that of profuse bleeding in order to check the bleeding, and not to do the plastic work, and that plastic repairs for future functional results, should take place at a period of from six weeks to three months after delivery. All cases of lacerated perineums should be repaired at the time of delivery. This includes both the muscle and fascia. I should like to ask Dr. Slater, if he repairs only 39 per cent of cervical tears, what are his criteria when repair work should be done?

In Dr. Davidson's paper there are two things that I would like to mention. In cases of postpartum infection, a great many of these cases can be eliminated by the proper clearing up of the cervical infection before delivery by cauterizing the cervical tears and clearing up the endocervicitis. Secondly, rectal examinations are

satisfactory as any other examination before delivery, provided you have accustomed yourself to doing them. I believe that vaginal examinations should only be done in special cases, and then only under strict aseptic technique, in order to prevent infection. If you have a postpartum infection, and this is associated with chills and fever, one had better treat the general physical condition of the patient rather than institute any manipulation of the uterus, for in such cases, we are usually dealing with a septicemia. By building up the general resistance of the individual by transfusions, diet and fluids, and leaving the uterus alone, the results will prove much more satisfactory.

**R. C. Burrow,** Cunningham: I can't discuss Dr. Reddick's paper without referring to Dr. Turner's paper on early diagnosis of tuberculosis. This question so often comes up that we want to make an early diagnosis whether there is any tubercular trouble there or not. I have been sorry to hear Dr. Turner say that with all the help he has at his hands there is no such thing as an early diagnosis of tuberculosis. I am going to relate conditions without the help that Dr. Turner has at his command where we do make an early diagnosis of tuberculosis.

The case I have in mind was one where the mother died in confinement, or right after confinement, and left a living baby. That baby was reared by its grandmother until it was a year old—a beautiful picture of health until the accommodating father made the great mistake of getting another mother for the child, and he got a mother with open tuberculosis. Immediately after the baby was taken from its grandmother into the new home, it went into a decline. The grandmother's diagnosis was that the stepmother didn't take as good care of it, but after seeing the stepmother with open tuberculosis my diagnosis early in the case was a tubercular child which would die within two weeks from tuberculosis. Those conditions help us in innumerable cases to make an early diagnosis of tuberculosis.

I don't believe I am conceited. I believe it is the experience of the general practitioner that he makes such careful physical examinations without the help that Dr. Turner refers to. Dr. Turner depends upon that help to prove his diagnosis. I believe I can examine a person and if there is anything else the matter, after close observation for a while I can be able to say that there is nothing else the matter and that if there is nothing else it is tuberculosis when I see those patients going into a decline.

I believe in seeing where the mother came from. Has the mother been exposed to open tuberculosis? Is she in a decline of any kind? Examine carefully and see if it is due to anything else. If it isn't it is tuberculosis, and terminate the pregnancy in all tubercular mothers.

**John M. English,** Elizabethtown: I rise in defense of my colleagues back in Hardin County against the onslaught that is made against the general practitioner and also his obstetrical ability. We have doctors in our county who do as good obstetrics as they do anywhere in America. Not only that, but we do these obstetrics under adverse circumstances in a great many instances.

These essayists would have you believe that a woman cannot be delivered of a baby except in a hospital. The books teach you that. You get a new textbook on obstetrics and the first thing you see is that she must be delivered in a hospital. I have delivered babies and the doctors in my county have delivered babies and we will continue to deliver babies as long as there are babies, in cabins, wash our hands in automobile buckets, take our own towels with us or wipe our hands on an old sheet or a shirttail, deliver the babies, and have no septicemia.

After about thirty-one years of experience in country practice, delivering some 1300 babies—the last notice I took of it, it was about 1350 babies—I have never had a case of puerperal septicemia. I can show you four more doctors in my county about my age who have been practicing medicine about the same time that never had any cases. Those people that Dr. Davidson mentioned over there in Illinois must be darned dirty folks. You can be just as clean in a home as you can be in any hospital. I have seen homes that I would rather deliver a baby in than in a hospital. It is a mighty nice thing to go into a hospital and have everything handed to you when you ask for it, and put on that robe like a Jewish rabbi, and a mask on your face and put on your rubber gloves and all that paraphernalia, but women are going to have babies in the country, they are going to have babies like they always had them, they are not going to have puerperal septicemia, we are going to deliver them like we always have, and we are not going to pay any attention to this hospitalization of all cases. If I went back to my county and recommended a thing like this they would hang me in effigy tomorrow.

I speak not only for my county; I speak for the general practitioner all over the State of Kentucky who are the bone and sinew of this Commonwealth, and we have been infringed upon by the specialists in all particular lines until we are practically doing petty larceny. If you all have got the gizzard that Kentuckians should have to rise up and fight this thing as we are fighting it in our county and as we will continue to fight it in our country, you will get somewhere with it. If you want to be a clear-

ing house for the city hospitals, keep it up, but I'm not in it. If I can make that any stronger I will talk to you privately about it. (Laughter and Applause).

**C. W. Hibbitt,** Louisville: The time has been so taken up that I can say only a word or two, on the second paper first. I think probably there are only one or two indications for immediate repair of the cervix, and one is hemorrhage, and another is extreme trauma or probable traumatism that involves the junction of the vagina and the cervix. After the head passes through the cervix you know the cervix is dilated to its extreme. If you endeavor to repair that by placing sutures in during extreme dilatation, (realizing that that cervix contracts immediately) in the course of forty-eight or fifty hours that cervix is down to near its normal size. And the sutures accomplish very little. I doubt if you get any result at all in the immediate repair of a cervix unless the trauma has been extreme or the laceration associated with considerable hemorrhage.

Reference now to management of postpartum infection. I think the early diagnosis is sometimes confusing, especially when we have a chill and high temperature and profuse discharge from the uterus. In that condition I think we can class it as a sapremia. If we have very little or no discharge, with high temperature and chill a few days following delivery, we can class that possibly as a true streptococcic infection. If we can trace our infection to a gonorrheal invasion upward, we can feel much safer with our patient and go home satisfied that we can carry her through to a successful termination, because we know that the gonorrheal infection invades the uterus and travels on up into the tubes and nature will take care in most cases of the gonorrheal infection in the course of three or four weeks. If it is a streptococcic infection we know that the invasion is through the wall of the uterus out into the lymphatics and the base of the broad ligaments.

As soon as you decide that you have a puerperal infection, do not manipulate the uterus, stop your digital examination, give the pelvis a chance to wall off or protect itself, and the lower abdomen and the pelvic structures will take care of this infection in certain cases by walling off the abscess behind the uterus which can be drained at the proper time.

Support the patient and an occasional blood transfusion which will carry them to a successful termination or to the surgical stage where the pus or the pathological condition can be cared for surgically.

**J. T. Reddick,** Paducah: I first want to say that the first ten years of my practice were horseback and saddleback practice in the country, and I endorse practically everything the Doctor from Hardin County says. I learned obstetrics under the most adverse conditions and I agree with him in a great many respects.

I just want to ask a question. In the immediate repair of the cervix, what suture material is preferable? I don't think that has been mentioned.

In regard to my own paper, I want to thank the gentlemen for their splendid discussion. As I said in the paper, I do not think that arrested cases should be aborted because the patient will usually go on to the end of the term and may get well. To abort the active, well-marked case will usually mean two deaths, the death of the child, of course, and perhaps death from the operation, or very soon afterwards, of the mother.

Having been interested in the study and practice of obstetrics for more than half a century, I hope with a reasonable degree of success, under all conditions from the one-room log cabin in the middle of a cornfield, the last house up the creek, in an ambulance going to a charity hospital, in a gypsy tent with nothing intervening between the mother and the earth except a piece of straw matting (and by way of parenthesis I may say that gypsy woman got up in less than twenty-four hours and went to the wharf at Paducah and got on a boat and went to Cairo), up to a Class A hospital in a modern, well-equipped delivery room, under rigorous aseptic technic, surrounded by the abundant assistance of trained and senior student nurses, and having given this subject a considerable degree of study and also having read the reports of eminent obstetricians, I am forced to the unqualified conclusion that few if any tuberculous women should be aborted.

**James G. Slater,** (in closing): We use the forty-day chromic catgut in the cervix, tied tightly.

I want to congratulate the Doctor on his success with obstetrics. I practiced in the country myself for quite a number of years, and I find quite a different class of patients in the city from those in the country. I am sure that with the modern facilities many of these doctors would do even better work than is being done.

The technic in regard to antiseptic is this. We use alcohol in the vagina after repair. That causes uterine contraction; it stops capillary hemorrhage, and it in a sense coagulates and seals, and we think probably prevents infection.

We repair our perineum with catgut, and suture, in tiers, muscle, fascia and skin, usually using about a No. 2 catgut. They do not have to be removed and the patient is relieved of a lot of mental anguish because of the dread of having stitches removed.

I want again to say that we are entirely satisfied with the results we are getting. Dr. Ryan has had the privilege of examining numbers of these patients. We examine every one of them at the end of three months. It has not been my experience to find all cases damaged.

However, the damage that I spoke of in this paper, of thirty-nine per cent, were spontaneous deliveries. That does not include interference of any type.

The Doctor spoke of this repair being done in about six weeks. How many patients will go to the gynecologist in six weeks after their babies are born? Most of them find their way to someone who will treat them medically. I had a patient in my office recently who had been going for two years twice weekly, paying $3 per treatment, for ulcerated cervix. The great majority of these cases go to the gynecologist because, as a rule, of far advanced pathology, as was stated in the paper.

This field offers a definite opportunity for advance in obstetrics. Do we stop to realize that obstetrics is the only branch of medicine today where the mortality rate is increasing? It does seem to me there is a field for intervention here of some type, and I believe that this will help, and I shall continue with this line of treatment until I find different.

The technic is simple enough to be regularly employed by all men qualified for obstetrical work and having their patients hospitalized.

In speaking about rural districts, when I left Covington just the other day we had six patients at that time in the hospital sent from rural districts who had been given a test of labor from eight to twelve to fourteen hours before bringing them in. There are about seven counties that supply our hospital. We did not mention the work that is done in the home because that is practically all normal. We do not examine for lacerations in the home because we don't feel it is safe. We do not deliver priniparas in the home.

This work is economic and of prophylactic advantage to the patient. This work properly belongs to obstetrics rather than to gynecology, and by not repairing we render our patient liable to any condition of minor or major pathology.

**H. A. Davidson,** (in closing): Mr. Chairman, I expected a greater eruption than I received from the country. Before coming here I asked the obstetric supervisor in the hospital with which I am connected if she had had any puerperal infections in that hospital since she had been with it. She had been there for nine years. She said, "I do not remember a single infection that originated in this hospital."

The doctor from the country says he has no infections. Dr. McCormack, I think we will have to investigate your statistics as to where these cases of puerperal infection come from.

I wanted to bring out one or two points in the treatment. This is especially good for the country doctor. You know we have used antiseptics in the past, intravenous antiseptics, like mercurochrome and some others I could mention which give decided reactions, but recently there is a very good one: Use 10 c. c. of a 1:1000 solution of metaphen intravenously, and you can use it every day for several days. Some remarkable results have been reported recently in cases of puerperal infection. You get no decided reaction from it. That treatment can be carried out in the country homes.

## THE CARDIOPATH*

O. P. Nuckols, M. D.

Pineville.

In this paper that I am presenting to you tonight, I have sought rather to write of the "patient who has the disease," than "the disease which has the patient," yet it is very much like undertaking to separate the "Siamese Twins" for one cannot well exist without the other.

Many of us can well remember when "heart trouble" just simply meant "heart trouble," but during the last one or two decades the field of Cardio-Vascular diseases has been so thoroughly worked and so completely overhauled, that today it ranks as one of the most, if not the most important of the various specialties. No longer does the conseientious and competent physician push the cardiopath aside and relegate him to the dump heap of the incurables, but rather with heart and mind and soul, he brings to his aid every known method in making a correct diagnosis and in making application of the most scientific therapeutic measures.

Some time ago I noticed in a vital statistic report some of the principal causes of death in the great city of New York during the calendar year of 1922, and out of the 143,000 deaths reported, that of organic heart disease headed the list as a cause of death, with its 19,998, tuberculosis coming next with its 18,102.

It would seem with such reports and such figures that it would be sufficient evidence to enlist the earnest effort of every physician in the land in the welfare of this tremendous army of human beings that are at this hour marching onward to an untimely death. I say untimely in the sense of preventive medicine, for I have no doubt but that a very large per cent of these cardiopathic diseases could have been prevented by timely and proper treatment of the infectious and toxic diseases that stand in a causative relationship to the major portion of them.

There is seldom presented to the physician a more pathetic picture than the plaintive look, the bleared eye, the breathless speech, and the shambling gait of the advanced cardiopath. No surgeon's knife, no spinal

*Read before the Bell County Medical Society.

adjustment, no bone manipulation, and no suggestive dream can reach his case, and only by the most careful and scientific management, and therapeutic aid may he hope for some slight measure of relief.

But it is not to this extreme picture to which I wish to call your attention, but rather to the pre-cardio-vascular and the early cardio-vascular stages, or as I might say, to the pre-enlistment or early enlistment periods of this vast army of cardiopaths.

We must not fall into the fallacy of looking only among the old or the middle-aged for the raw recruits for this great army, for it is a matter of appalling surprise to find so many cases of cardio--vascular disease among the young, and I am almost convinced that the primary cause in a very large per cent of these cases is tracable to the infectious diseases of childhood.

I shall not go into any detailed description of the anatomic features of the cardio-vascular system, more than to say that it is the great highway by which the blood is conveyed—whether pure or impure—to every organ and every tissue that constitutes the human organism. This blood may be as pure as the rippling brook, or as foul as the stagnant pool. If this blood stream be free from all toxic and irritant substances, and also free from all infectious germs, this great highway may only suffer from gradual wear and tear, and life glide smoothly on, into the peaceful shades of a ripe old age, but if there be present in the blood stream toxic and irritant substances or disease germs, there may be a break in its carrying capacity at any point along the way and some form of cardio-vascular disease become the result. I hasten to have you understand that I do not think this intra-vascular cause is responsible for all cardio-vascular trouble for there are many causes extrinsic to the blood current, such as hard labor, the various and much diversified excesses, or may be a break in the normal harmony of the endocrines.

I have but to say that with a proper conception of these causative factors before us, they point like the hands on the dial to the wonderful possibilities along the lines of prevention. If we only pause for a moment and think what it means to subject the heart to severe over-strain to load the blood stream with toxins, to indulge in dietetic and other excesses, we as physicians can give timely and wholesome advice to our patients, and to the public in general that will be helpful in the prevention of many of the cardio-vascular diseases that are rapidly becoming so prevalent.

Many of the cardio-vascular cases with which we meet, especially in the young, give a history of some previous attack of so-called rheumatism. Others give a history of tonsilitis, chorea, scarlet fever, whooping cough or measles. The history of tonsilitis followed by rheumatism is so frequent that it remains an open question whether or not the tonsil is not the open gateway of infection in the majority of cases of so-called rheumatism, which is followed by some cardio-vascular lesion. In finding cardio-vascular lesions in life insurance examinations of young men, also in examinations for army service a history of rheumatism has almost been universal. I can recall a few cases of cardiac lesions in my private practice which were preceded by chorea, and a few cardio-vascular renal cases, which were preceded by scarlet fever. I have seldom found measles a true etiologic factor in these cases.

It would seem from the foregoing facts that the after-treatment of these infectious diseases should include a careful examination of the heart and kidneys, and every precaution taken to prevent these after-coming sequellae. These cases should be kept under observation until such a time as we could feel assured that the patient was free from infection and as near a normal condition as possible to obtain. By such a regime I feel confident that many of these complications and sequella could be avoided and many lives saved.

The Cardiopath presents a case for an interesting study, and suggests a number of very important questions to be taken into consideration before making any particular classification of the particular case in hand.

(1) Is this a functional or organic condition?

(2) Is it extra-cardiac or intra-cardiac?

(3) Is it a cardio-vascular renal condition?

Before entering into any discussion of these questions, some of the fundamental diagnostic outlines must be considered. We must first know what are the normal outlines of the heart and pericardial sac. We must be familiar with cardio-vascular acoustics, and the location of relative and actual cardiac dullness, cardiac murmurs, friction sounds, and vibratory thrills. A cardiac murmur is a sound which may be produced by an obstruction to the onward flow of the blood current, or by a directional change in the blood current, or, upon the other hand, it may be due to some change in the composition or fluidity of the blood itself.

If upon careful examination the normal outline of relative and actual dullness are found to be present, and there are corroborative evidences to lead to the belief that there are changes in the composition or fluidity of the blood, such as is found in cases of well marked anemia, together with breathlessness

and easy fatigue, you may be reasonably sure that it is a functional trouble and will improve as the general condition improves. Especially is this true if the murmur is not reflected beyond the cardiac area to any distance. Some further characteristics of hemic murmurs are that they are usually systolic in time, usually soft and blowing and located over the pulmonic area and accompanied by a venous hum in the right jugular vein.

The organic murmurs are due to either a narrowing or stenosis upon the one hand, or a widening of the valvular openings upon the other. In the one case there is an obstruction to the onward flow of the blood and in the other a directional change or regurgitation. The murmurs due to these organic changes are heard best over certain "areas of maximum intensity." And these endocardial murmurs are transmitted by the blood current in definite directions beyond the borders of the heart. And the further fact must not be lost sight of that the lessening of a murmur in organic disease does not always mean an improvement of the condition, for it may be due to the gradual weakening of the heart muscle itself. If the case in hand has been of some duration, there may usually be found evidences of either hypertrophy or dilatation. As to time, the murmur may be either pre-systolic, systolic, or diastolic.

By compensation we mean that the mechanical changes in the heart are more or less overcome, so that the circulation is maintained in a normal, or nearly normal state.

In any classification of cardiopathic diseases, there is one condition that comes in for special mention, and that is the cardio-vascular renal cases. In these cases there is always a question at issue as to whether the case is one of primary renal or a primary circulatory disease. In these cases, if of any duration, there is usually a well marked degree of hypertrophy and blood vascular changes, giving rise to high blood pressure.

There is still to be mentioned the diseases of the heart muscle itself or the myocardium. These myocardial diseases and especially the degeneration are often mistaken for functional disorders in the young. While it is true that heart weakness in the young is generally due to functional disorders, in those past middle life it is well to suspect some organic changes. It is in these border line cases that the efficiency tests of Graupner and Shapiro are of help in making a differential diagnosis.

In a paper of this length it would be impossible to enter into a discussion of a differential diagnois of the many and varied cardio-vascular lesions. However, we should get a correct estimate of the amount of reserve force in every case before forming our conclusions as to the regime of life best to advise.

The cardiopath is an interesting study from the standpoint of diagnosis, and it is upon the diagnosis made, that should govern us in the subsequent management of the case. It would be a very serious blunder to interpret the rapid and feeble heart, due to myocardial inefficiency, as being due to some nervous reflex, and fail to give the heart the needed rest that is so essential. It would also be a very serious mistake to diagnose a heart murmur as functional, when it was due to acute dilatation of the heart muscle itself, thus preventing the perfect approximation of the valves and giving rise to a murmur.

So, it becomes very apparent that the proper management and treatment of the cardiopath resolves itself into a matter of correct diagnosis, as a foundation upon which to build a treatment.

There is an expression often heard, and I am sorry to say at times among many of our best physicians "that it matters not what your diagnosis, you give Digitalis any way." I want to take issue with such a dictum, and at the same time want to admit that this remedy does find a place in the judicious treatment of a very large per cent of cardio-vascular troubles, yet it is not free from doing much harm in many other cases.

I want to emphasize the fact that we should look upon the cardiopath—and I mean by that any patient suffering from any cardio-vascular trouble—as a composite entity, and study, and in so far as our power lies, correct all other factors that might act as contributory causes to his or her distress. It is a very simple matter to prescribe some seemingly indicated remedy, or heart drops, but it is quite a different matter to formulate a treatment that takes into account the patient, and his or her environment, including all the modes of life, such as diet, sleep, exercise, the care of the organs of elimination, etc. In the cardiac neuroses the treatment consists of dealing with conditions that as causes are oftentimes quite remove from the heart itself. It is well to bear in mind the fact that the heart is a muscle and composed of muscle tissue, but is under the control of a very complex nervous mechanism, sometimes referred to as the wiring of the heart. Its accelerator nerve supply is received from the sympathetic system, through the cardiac plexus, while its inhibitory supply is from the pneumogastric, which also sends supply to the bronchi, stomach, gall bladder and intestines.

The cardiac cycle is initiated at the sino auricular node, which is often referred to as the "pacemaker" of the heart. This is the central station, so to speak, and the rate at

which impulses are sent out from this station are under the dual control of the sympathetic and the pneumogastric. The vagus, slowing the rate, and the sympathetic, accelerating it, which when under perfectly normal conditions, is in perfect balance.

From this particular node the message is carried to the ventricles by way of a specialized cable called the auricula-ventricular bundle, also known as the bundle of His.

With this picture in mind, it is easy to see how many of the cardiac arrhythmias with which we meet may be due to some disturbance of this nerve telegraphic system. Functional or organic changes in the bundle of His may so disturb this telegraphic system as to cause "heart block" either partial or complete. Stimulation through the vagus, as a reflex from the bronchi, the stomach, gall bladder or intestines, may slow the heart or render it irregular. Stimulation through the sympathetic may so completely overcome the vagus control, as to cause tachycardia. Bartholow thus explained the tachycardia of Exophthalmic Goitre. These various factors must be taken into consideration in the classification of the many cardiac neuroses with which we come in contact.

### Treatment

The treatment of the Cardiopath is susceptible to division into the following groups:

(1) The functional disorders and the cardiac neuroses.

(2) The mild organic troubles and the more advanced but fully compensated cases.

(3) The more extreme organic cases in which compensation is broken.

(4) The extra-cardiac cases and the cardio-vascular renal cases.

The treatment of the first group calls for the treatment of the underlying causes. If it be a case of hemic murmur and weak heart as the result of anemia the treatment should of course be directed toward the improvement of the blood. If, upon the other hand, the case be one of the cardiac neuroses, the cause must be sought out and the treatment directed toward removing the cause. Many of the cardiac neuroses are benefitted by Strophanthus or Digitalis combined with nerve sedatives as the bromides and hyocyamus. This line of treatment is especially helpful in the tachycardia of exophthalmic goitre. Heart block is sometimes wonderfully benefitted by belladonna or its alkaloid atropine.

In the second group of mild or fully compensated cases of organic diseases, the treatment must be directed toward preventing as much as possible further damage. It is in these cases that proper advice as to modes of life are so helpful and constitute the principal part of the treatment. It is often a difficult matter to decide as to the amount of exercise or work that can be with safety allowed. It is in these cases that the efficiency test of Graupner can be used with benefit in determining the amount of reserve force in a given case. Nature makes an effort to overcome the defect by a gradual process of hypertrophy and if the heart is constantly required to do an over amount of work, either by strenuous exercise, or by hard work, the process is much more rapid and the day of an inevitable break in compensation hastened. It becomes, therefore, very apparent that the principal prescription to be given to the patient is in the nature of advice about the things he or she should do, and the things he or she should not do. All exercises should be carefully avoided, and the functional care of the digestive and eliminative systems should receive scrupulous attention. These cases will require but little medication and should be in most cases purely symptomatic.

In the third group we meet with the end results of the second group, and an entirely different regime should be instituted. We meet with a patient in great distress, with a heart that is laboring to perform a task that it is poorly equipped to perform. The walls of the heart have passed into a stage of dilatation, with the muscle wall thin and flabby, and the contractions rapid and weak. There may be oedema of the lower extremities or general anasarca owing to the stage at which the case is first seen. Dyspnoea adds greatly to the distress in advanced cases. It is to be understood that the same general care of the systemic functions should be carefully looked after as in the preceding groups. In practically all cases rest should be enjoined over a more or less protracted period. It is in these cases that Strophanthus, Digitalis or Spartein are of much help in restoring compensation. Usually my preference is Digitol for a short time, and a change to Strophanthus if it is necessary to continue for any great length of time.

However, if there is reason to suspect degeneration of the myocardium these drugs should be used with great caution. Where oedema or anasarca is a prominent symptom, it is best to restrict the fluid intake to the minimum, and withdraw salt from the diet. Such other treatment as will improve the nutrition and build up the general musculature is indicated and should be used.

The extra cardiac conditions are too numerous to bring into any discussion of this length and should be dealt with according to the indications of the particular case in hand. However, I want to mention briefly the cardio-vascular renal cases, in which will usually be found the tripod of symptoms, hypertrophy

of left ventricle, vascular sclerosis and interstitial nephritis.

This condition is almost always attended by high blood pressure, and its attendant symptoms, fullness in head, basal headache, and vertigo. We cannot hope to repair the damage that has been done when the case comes into our hands, and our treatment should be directed toward preventing so far as possible further damage. There is usually capillary fibrosis of the kidney and brain, as well as portions of the periphery which calls for special treatment. The nitrites are very much used to dilate the capillaries and lower blood pressure, but my experience with them has been rather unsatisfactory. The effects are transient and have the disadvantage of often deranging the stomach.

In the DeArsenval or Autocondensation electric current we have a remedy of real value. This treatment has the advantage of improving cell metabolism and thereby improving nutrition, as well as favoring the elimination of waste, dilating the capillaries and lowering the blood pressure. It is further believed that it favors decalcification and retards the process of arteriosclerosis.

It is my opinion that this current persistently used, cojoined with rest, proper diet and elimination constitutes the best treatment for cardio-vascular renal disease.

In conclusion if I have succeeded in bringing this subject to your attention and presenting to you some of the more fundamental facts which will bring about a greater interest in this very important field of study, I shall have accomplished the purpose for which I have written.

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**Splanchnic Nerve Section in a Diabetic Patient.**—De Takats and Fenn performed bilateral splanchnic section on an 18 year old diabetic girl to stabilize and increase her sugar tolerance. There has been an immediate drop to one half of her previous insulin requirement, which seems to be due to an increase in insulin sensitive and which has persisted for four months after the operation. The operation resulted in an abrupt change of the dextrose; insulin ratio of the diabetic child from 2.5:1 to 5:1. This change occurred after section of the left splanchnic nerves, whereas the later sectioning of the right splanchnic nerves did not produce any further improvement. During the postoperative period of four months, the patient's weight increased 15 pounds (6.8 Kg.). It is of some significance that several subsequent attacks of infection of the upper respiratory tract did not upset her insulin requirement. This now seems to be stabilized at from 20 to 25 units for a diet of 120 Gm. of available dextrose.

## LYMPHOPATHIA VENEREA INVOLVING THE RECTUM*

RUFUS C. ALLEY, M. D.

Lexington.

### CLINICAL FEATURES

In a recent preliminary report I pointed out that cases of Lymphopathia Venerea (also called Lymphogranuloma Inguinale; Tropical Bubo; Nicolas-Favre Disease; Fourth Venereal Disease; Etc.) have been discovered in and around Lexington, Kentucky, in appreciable numbers (22 cases).

It is a significant fact that this disease, which is primarily venereal, often becomes localized in the rectal and perirectal tissues with serious consequences. For anatomic and pathologic reasons this rectal localization is seen most frequently in women, and negro women seem to be especially susceptible. It is characterized by an ulcerating proctitis, with or without painful ano-rectal abscesses and fistulae. A free discharge of bloody pus is usual. Progressive infiltration and thickening of the rectal wall precede gradual cicatricial stenosis. For this reason the term "proctitis obliterans" has been aptly applied. Fibrous stricture of the rectum finally results.

Treatment: While the etiologic, pathologic and diagnostic aspects of this disease are quite fascinating, the unfortunate patients require treatment.

In the advanced stage with dense, obstructing fibrous stricture of the rectum, colostomy is necessary as a life saving measure.

The pre-stenotic stage, i. e., the stage of ulcerative proctitis with infiltration and thickening of the rectal wall, is the most promising from the standpoint of specific treatment.

I have used the Frei antigen in the treatment of four patients in this pre-stenotic stage and the results are encouraging.

The technic of treatment is simple and is essentially the same as that of the diagnostic test. With a tuberculin syringe and small, sharp hypodermic needle, preferably dry sterilized 0.1 cc of the antigen is deposited intradermally. I believe intradermal administration to be more effective than subcutaneous or intramuscular injection. The dose is repeated twice weekly.

All four of the patients treated were negroes, two women, age 30 and 33, and two men, age 27 and 33. It is interesting to note that both of the men were sexual perverts and were undoubtedly infected during sodomy. The recta of these four patients were strikingly similar. All presented the

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*Read before the Fayette County Medical Society.

ulcerated, granular surface with copious bloody pus discharge resembling cream of tomato soup. The rectal walls were thick and leathery to the touch. From 3 to 8 daily passages of mucus, blood, and pus were usual. The blood Wassermann was negative in both women and positive in both men although it is known to have been negative in one of these during the first two of the past three years and during which time the rectal disease was active.

Following the first few injections of the Frei antigen two of the patients noticed definite focal activation of their rectal lesions characterized by increased bowel activity, diarrhea and tenesmus. This subsided after 24 or 48 hours and both patients stated with enthusiasm that they felt better locally and generally than they had for many months. They requested more "shots."

Each of the four patients has received 15 to 30 intradermal injections and all have shown considerable subjective and objective improvement. The most striking change has been the diminution of rectal discharge and discomfort.

The results obtained in these therapeutic tests further substantiate the specificity of the Frei antigen.

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**Treatment of Grip in Children.**—Petranyi states that his own observations and those of others disclosed that the medicine administered was most effective (1) when it contained amidopyrine or derivatives of midopyrine and (2) when larger doses than usual for babies and young children were given. This experience induced him to administer amidopyrine in unadulterated form in the following dosage day and night until the temperature reached normal; from birth to 1 month of age, 0.05 Gm.; from 3 to 6 months, 0.1 Gm. from 6 to 12 months, 0.15 Gm., and from 2 to 5 years, 0.2 Gm. As soon as the temperature had fallen below 37 C. (98.6 F.) and had remained at this point for at least half a day, the intervals between the doses were lengthened to three hours, and if fever remained absent, to four hours; later it was sufficient to administer the amidopyrine three times a day. If the temperature again rose, the intervals between the doses were decreased, this variation in interval continuing as long as necessary. The amidopyrine was prescribed in a 3 to 4 per cent solution, to be taken in a concentrated syrup. By this means an effective concentration of amidopyrine in the organism was reached and maintained. To stop the medicine too soon or too suddenly is an error; the diminishing of the concentration of amidopyrine demands great care or the drug does not have its full effect. The author tried the treatment in more than 100 cases.

## A PLAIN TALK TO THE PUBLIC ON CANCER*

Louis Frank, M. D.

Louisville.

The oldest university as we interpret a university was established more than 1000 years ago at Salerno in Italy. The oldest university west of the Alleghanies, municipally supported, was established here in Louisville just short of 100 years ago. Both in their beginning taught only medicine. What more fitting than that the University of Louisville should instruct the citizens of this Community and Commonwealth in matters concerning health.

The topic which has been allotted me to present to you in the short period at my disposal, while not a pleasant one, is one nevertheless which has concerned us since ancient times and which in some respects despite the vast expenditure of time and money in investigation remains today, so far as cause is concerned, one of the great mysteries.

The subject of my discussion is Cancer, a disease of ancient lineage, which as we prolong life by improved hygiene, by preventive medicine and better living conditions plays a more and more conspicuous part as a cause of death.

Surely most of my hearers recall that a few years ago Consumption headed the list as a cause of death in this County. Today the White Plague ranks eighth as a cause of death and cancer occupies second place with an increasing rate each year, so that at present the total deaths amount to over 150,000 in the country at large and to over 2,000 in the State of Kentucky alone.

A moment ago we referred to the cause of cancer as remaining a great mystery. Even so, we have ascertained factors which play a large part and an important one in preparing the individual for the growth of this terrible disease. We have been able to grow cancer cells in culture media, we are studying them and have learned to prevent cancer and we also know that early cancer is curable The idea that the disease is contagious still prevails even among some doctors but this is not true, it is not catching and there is not the slightest evidence in favor of the belief that it is. So far as we know there is no cancer germ and students of the disease as a result of the known facts regarding the many varieties of the disease give no consideration to such a theory or belief. There has never been a single instance of infection reported from contact among the thousands of

*Radiocast over WHAS April 9, 1934.

doctors and nurses who have handled patients with cancer.

And yet as previously stated Cancer is an old, very old disease. We possess definite proof that the disease antedates man, even prehistoric man and antedates the age of mammals on this earth. The Ebers Papyrus, which is the earliest medical document we know, contains reference to tumors and, in an inscription from Ninevah, 800 B. C., we find cancer of the breast described with quite some detail. The Greek surgeon Democedes, who was employed as city physician of Athens at a salary of $2,000.00 a year, described the cure of breast cancer in Atossa, the daughter of Darius Hystaspus.

Why then, you ask or wonder, if cancer is so old have doctors not discovered a cure, why does it kill its thousands each year, what will we do about it, can we diminish the number of deaths? These are the vital questions in which you are after all interested. To answer the last question first, we may say that the number of deaths can be lessened but only through early diagnosis, that is recognition of the disease and its prompt removal. The American Society for the Control of Cancer has been formed and is supported because it was felt that there are simple facts which if put in the possession of the general public would lead to the early recognition of cancer symptoms and thus make possible a cure. It is most essential, however, that we cease to look upon cancer as a disgraceful affliction or as something to be hidden or concealed. It is not a disease due to filth as is typhoid or the recent epidemic of Amebiasis and to be ashamed or to conceal is only to add to one's danger and greatly lessen any chance of eradication of the growth. The situation can be materially helped and possibly even be done away with by early recognition or diagnosis and prompt removal of the growth. The high death rate is due to the fact that many cases are not diagnosed as cancer until the disease has spread through the body.

Let me give an example as illustrated in the person of two of our Presidents. In 1884, in September, Ex-President Grant consulted a physician because of severe pain in his throat. He was advised to see a specialist at once but deferred a couple of months and was then told that he probably had cancer. Further delays occurred and when in January of "85" a specimen was procured and examined and pronounced positively as cancerous—it was too late and after much anguish and suffering he died in July of "85."

Eight years later, a few months after his second inauguration, Grover Cleveland noticed an ulcer in his mouth. Dr. O'Reilley, an army surgeon, saw him, suspected cancer, removed a small piece, had it examined, found positively it was cancer and advised immediate operation. We were in the midst of a terrible panic, almost as bad as at present but there was no delay On June 30, "93" President Cleveland boarded a private yacht and was operated upon, the cancer being removed. He made a prompt recovery, lived out not only his term but his life, dying in 1908 at the age of 71. It was 25 years before the details concerning President Cleveland were revealed in a magazine article by Dr. W. W. Keen, one of his surgeons.

These two episodes from American history offer an important lesson and stress and emphasize what we mean by prompt removal. Prompt removal depends necessarily upon prompt recognition or diagnosis and without this there is always delay and spread of the disease.

Delay may be the result of: 1st, Ignorance upon the part of the patient or a hope that the doctor is mistaken in his diagnosis.

2nd, Unreasoning fear.

3rd, Inexperience upon the part of the doctor who first sees the patient.

First, Ignorance upon the part of the patient. A painless lump or a sore which persists for more than ten days or two weeks and is not especially painful, and causes little inconvenience, naturally fails to alarm the individual. He or she goes along, not bothering much with a thing that gives so little discomfort. Only after months, when the lump or sore has grown larger, is advice or treatment sought. Precious time has been lost which cannot be regained. The growth has been allowed to gain increasing headway during all the time that has elapsed since its first appearance.

What must the individual be on the watch for, in order that he may guard his own health against cancer?

The danger signals of cancer are well established. Briefly, they are these:

An obstinate sore upon the surface of the body, particularly about the mouth, tongue and lips.

A mole, wart, or similar skin blemish which becomes irritated or changes in shape, appearance or size.

An abnormal discharge, particularly if tinged with blood, or any irregular or profuse bleeding.

A lump or swelling in the breast.

These all may be, and often are, symptoms of something other than cancer, but they are if not absolute danger signals certainly warning ones. They indicate something is wrong and show the necessity of a thorough examination by a competent physician.

Second, Unreasoning fear upon the part of the patient. Unfortunately, there is a pre-

valent but wrong idea that if a person has cancer he is doomed from the beginning. Consequently, every means is used by people with this idea to ignore the condition, to procrastinate, to avoid examination. If the lesion suspected of being cancer is not one in reality, fears will finally prove to have been groundless but there will have been months of unnecessary worry.

On the other hand, if the suspected lump or sore actually proves to be cancer, what has been the result of delay? The cancer has been allowed to grow and spread until the time may have passed when successful removal is possible. Once the opportunity is past, the only chance for escape is gone.

Opportunity never knocks sufficiently loud to be heard by those not wide awake. In short, the patient who believes that cancer is hopeless from the start, naturally seeks every means to avoid being told that the condition is a cancer, and thus loses the only chance to escape death from the very thing so feared.

It is not a fact that all cases of cancer are hopeless from the outset, far from it. Thousands of people, alive and well today, leading normal lives have had cancers removed years ago.

The chance for cure of the disease, when the cancer is in an accessible locality, so that early diagnosis is possible, and when the proper treatment is given promptly, are as follows:

Cancer of the breast should be cured in 75 per cent of early cases, according to Doctor Joseph C. Bloodgood of Baltimore.

Cancer of the skin should be cured in 95 per cent of early cases.

Cancer of the lip should be cured in 88 per cent of early cases.

Cancer of the womb should be cured by radium in 85 per cent of early cases.

Cancer of the larynx such as destroyed Ex-President Grant, should today be cured in almost 100 per cent of early cases, according to the late Dr. John E. MacKenty.

Third, Inexperience upon the part of certain doctors, whose familiarity with cancer in its early stages has been limited. Many physicians may see not more than one or two cases of cancer a year, in the course of a general family practice. With every honest intention to do the best they can for their patients, they may, through lack of training or through lack of familiarity with this form of disease, fail to recognize the condition in its early stages. When cancer is suspected, it is therefore wise to have the opinions of two or three experienced men and if there is the least doubt, excision of a portion of the suspected growth for microscopical examination, which after all is the only positive means of diagnosis. It is for this reason that we examine all material removed at an operation to verify a diagnosis or to discover cancer in the very beginning itself.

In the less accessible localities of the body—as the gullet, stomach, intestine,—there may be disturbances of function; for instance, indigestion, not to be attributed to errors in diet or to acute disease. Here the x-ray comes in and is of the greatest value in locating the growth and often enables the surgeon to effect its removal. Modern developments in diagnostic x-ray and other methods of examination are today of tremendous help to the surgeon in locating and removing cancers of the urinary tract much earlier than was previously possible.

To summarize: The vast majority of cancers in accessible localities can and should be recognized early.

What facilities exist for the recognition and treatment of cancer?

There are modern well equipped general hospitals with doctors of wide experience in charge of each department, and also special hospitals which deal solely with cancer cases. Trained pathologists are employed by these general and special hospitals and by State Boards of Health to make microscopical examinations of suspected lesions and so furnish the practitioner and the surgeon positive information as to whether a tumor or sore is actually cancerous and often to tell him actually the kind of cancer present.

There are also Cancer Clinics in probably every state to which this broadcast is going. These clinics are engaged in diagnostic work, some also in the treatment of cancer. They should be, and most of them are, approved by The American Medical Association. The American College of Surgeons and the American Society for the Control of Cancer. In many of these clinics there is only a registration fee charged, services of doctors and laboratory being free. Two such clinics are conducted here in Louisville.

And now a few words to the mothers of children—the wives of fathers of children. The most frequent location of cancer below the waist line is in the womb, that wonderful home of the unborn child. Cancer of this organ is part of the price motherhood will cost you unless—you mothers have periodic examinations made by your doctor—unless suspicious lacerations and tears are closely watched or repaired—unless the inflammations of the mouth of the womb receive attention and are relieved by appropriate treatment. If this is done, if you give yourselves the proper care and if you receive the proper attention this great danger can not only be avoided in practically all instances but even should the disease have just begun, cure may

be brought about in all but the very, very smallest number.

Is it not worth paying attention to, is not so-called modesty under such circumstances rather fool-hardy ignorance? The answer is left with you.

THE TREATMENT OF CANCER

Like surgery, radium and x-ray are safe only in the hands of thoroughly trained men. Poor surgery and poorly administered radiotherapy, in the forms of x-ray or radium and its emanations, do more harm than good and cause much unnecessary suffering.

This is the cancer problem as we see it today. Thousands of lives can surely be saved by early recognition and prompt removal or destruction of accessible growths. Other thousands of lives can be saved by the prompt recognition of cancers located within the body.

The public must be educated to appreciate all these points for their own protection. Concerted public support must be given to;

1. Organizations for the education of the laity, and of the less experienced members of the medical profession.

2. Institutions for the care of hopeless cancer patients.

3. Research laboratories from which we hope will some day come a selective chemical or serum which will kill the malignant cells without harming the cells of normal tissues.

4. Hospitals which will take care of cancer patients i. e.: Cancer Clinics, from one to five effective cancer clinics are available in nearly every state. Write The American College of Surgeons; The American Society for the Control of Cancer; or the Cancer Committee of your State Medical Society, relative to the cancer facilities available.

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**Treatment of Agranulocytic Angina with Calf Spleen.**—Gray reports a case of agranulocytic angina with a positive Wassermann test to determine further the value of raw fetal calf spleen in the treatment of agranulocytic angina. The author believes that the ertent to which syphilis influenced the patient's condition is a matter of speculation. Because of her so-called leukopenic diathesis, which seems to have existed long before she contracted syphilis, the author doubts that it had much part in the causation of the agranulocytosis. While it is entirely possible that this patient may have recovered without any specific treatment and also that she may have a recurrence at any time, he feels as others do who have used it, that raw fetal spleen is of definite, specific value in the treatment of agranulocytic angina. The only objections to its use are the frequent difficulty in obtaining a fresh, adequate supply and the distastefulness for it.

## GASTRIC AND DUODENAL ULCER*

O. W. BROWN, M. D.

Foster.

This subject has been chosen for the reason that it concerns the specialist, on gastro-intestinal diseases, the surgeon, and most of all, the general practitioner of medicine. Ulcer of the stomach and duodenum will be considered jointly, because of a close similarity of the etiology, symptoms, and treatment of the two conditions. I realize that volumes may be written on one, or both of these conditions, and for this reason it is the purpose of this paper to attempt to discuss only the most important, or salient features relative to each.

Doctors have become so learned, so scientific and so well-trained in medicine and surgery, that it may seem almost preposterous to even attempt a discussion of any of the older diseases before a group of specialists, or general practitioners. Yet we are confronted (almost daily) with conditions that are a little bit different to anything we have read about, or have heard discussed before our medical societies. All of the lesions of the alimentary tract from the upper end of the esophagus to the sphincter ani are hidden from our sight, and the x-ray is not infallible in every instance. So why should any of us feel greatly chagrined if we should not always be correct in our diagnosis?

There is no doubt that gastric and duodenal ulcer is more common than was formerly believed, and that hyperacidity should be considered as one of the main factors in bringing about this condition. No doubt there are many and varied etiological factors connected with ulcer, but up to the present time no one seems to know just all there should be known about it. Anything that will cause irritation to the nervous mechanism of the stomach and pylorus, will, in an indirect way, have a tendency to bring on pylorospasm, and a certain amount of ischemia, or a spasmodic bloodless field. Of course not all ulcers are of the pyloric end of the stomach, but a very large per cent seems to be located in this region and the first few inches of the duodenum. For this reason alone we must know that something about the digestion of food is disturbed, or that there is a lack of something, or too much of something associated with the normal gastric juices. I have been impressed with the fact that chronic appendicitis may be responsible for many cases of duodenal ulcer, and that there is, in most cases, a long drawn out history of

*Read before the Campbell-Kenton Medical Society

(so-called) stomach trouble connected with a very large per cent of these cases. I have had a number of cases operated for perforated duodenal ulcer, and something like fifty per cent revealed evidences of a former inflammatory process about the appendix. This may be one of the reasons why some patients do not get well after an appendectomy.

So far as we know, the etiology of gastric and duodenal ulcer does not differ materially, but my experience leads me to believe that the great majority of sufferers from duodenal ulcer are in the male sex. All the cases operated, and ninety per cent of those that have been treated and are under treatment at the present time are men. Of course there is reason to believe that a gastric and duodenal ulcer may exist in the same patient at the same time, and that the gastric ulcer may have been first. It has been observed that we have families of neurotics, families of tuberculosis, families of cancer and we, no doubt, have ulcer cases in certain families. I personally know of three families that had two cases of duodenal ulcer in each, and all were in young, and middle aged men. Four of these were confirmed by Radiograms, and recovered by medical treatment. One of these cases had several attacks of appendicitis and finally had a gangrenous appendix removed after all symptoms of ulcer had disappeared. Two brothers in another family had appendicitis. One had appendix removed, and in something like three years, he had a perforated duodenal ulcer, and died in eight days after operation. The other brother had several attacks of appendicitis, but was not operated. In something like one year after his last attack of appendicitis, he had a perforated duodenal ulcer, and died about fourteen days after operation from pulmonary embolus. Some clinicians have attributed all ulcers to some focal infection, and true and urgent as that contention may be, yet there is no doubt that other agencies are operative at the same time. Anemia, worry, and nervous strain are potent factors in disturbing the digestive functions, exciting hyperacidity and pylorus spasm and playing a detrimental role toward trophic control and circulation.

The symptoms of ulcer may range all the way from none in one individual to the extremity of a chronic invalid in another, and there is no way or method that has been devised that we may know at all times who has, and who has not, duodenal or gastric ulcer. Yet I believe that ninety per cent of these cases can be diagnosed correctly by the average general practitioner if he will only take the time that it takes to make a correct diagnosis. These patients come to us from all walks of life, and from all social conditions. But the vast majority come from the wage earning class, and feel that they must continue to work. Most of them realize that they have something wrong with the stomach, and will usually tell us that they have indigestion, and we have no right to contradict it. The first question I usually ask them is: "Do you have any pain?" Many will answer in the affirmative. Then I asked them to point out with the index finger just where the pain is located. Some will tell you that they have no pain, but have a misery. Then the question is asked in reference to the taking of food: "Does eating make you feel better, or do you have relief from pain shortly after a meal?" Nine times out of ten a patient with duodenal ulcer will tell you that the pain is relieved by taking food, and it seems to make little difference whether the meal is only a light lunch or a large amount that is taken into the stomach. The hunger-pain is gone and they feel relieved of their weakness that was present only a short time before.

It is well to remember that many of these ulcer patients retain their normal weight over a period of months or years and experience very little discomfort, or loss of time from their usual routine. Again it is well to remember that many of them have been taking baking soda or milk of magnesia, or both, and that this self medication may have been holding their symptoms in abeyance. Again, the pains in gastric ulcer may simulate almost anything from true angina pectoris to that of tabes dorsalis, and it is always to our credit to find out, if possible, if the taking of food has any influence or is connected in any way with the pain. The older text books and other writings upon gastric ulcer indicated that the pain followed closely upon meals and subsided gradually thereafter until the next meal. This, however, is not the experience I have had with patients suffering from either gastric or duodenal ulcer. No doubt the location of the ulcer will have some bearing on the time of pain, and also the location to which the pain is referred. A very large per cent of ulcer patients in my experience do not have a history of any pain but do give symptoms of more or less weakness, nervousness, hunger, sometimes nausea and a general ill feeling when the stomach is empty. These vague symptoms and pain also (when present) will usually be relieved by food.

The cause of pain in ulcer has been much studied and much debated and it is useless to try to convince all physicians that one and the same thing is responsible in every case. There is one thing, however, that we do know, and that is the almost constant presence in every case of a hyperacidity, and that the administration of alkalies will relieve the pain

almost immediately. It would seem reasonable to believe that this pain could, and no doubt is, caused by more than one agency. Any irritant coming in contact with the pyloric muscles causing powerful contractions may bring on pain. We see this demonstrated very frequently by the giving of antispasmodics in ulcer cases. Many times I have given Tr. Belladonna or Atropine along with some alkali when the case proved to be a rather obscure stomach ailment, and the patient had almost immediate relief.

The treatment of ulcer should be emphasized as a chronic disease marked by a very strong tendency to recurrence and all that we can offer a patient is only palliative—this is the statement made by one prominent clinician of gastro-intestinal diseases. He states further that cure is very rare. It is my opinion that none of the Doctors present this afternoon will fully concur in such a statement. If they should, I must take issue with all. In the beginning, it seems important to emphasize the fact that too many ulcers are treated with a lick and a promise, or until they become symptom-free, and we know that this may, and usually does take place in 24 or 48 hours if we put patient on a strict diet and give alkalies and antispasmodics. When we treat a case of syphilis or tuberculosis, we do not stop medication because the patient may feel good in a few days, or weeks. We try to impress upon the patient that he has a chronic disease, and to effect a cure it will take months, or perhaps years. The same importance holds true in the medical treatment of ulcer of stomach and duodenum. We all will agree as to the necessity of bed rest in any case of ulcer where there is hemorrhage or constant pain, but it does not seem prudent to tell them just how long they must have this rest. One case may need this kind of rest for one or two weeks, and another may need it for many weeks.

We find that most of these cases come to us with a history of typical attacks dating over a period of months or years and often these poor people have been treated by numbers of physicians. One young man I treated over a period of several months did not return on schedule time, nor did he return for one year. When he came back, he told me that he had been treated by four different physicians during this absence, and that each one had made him worse. He was told at his first visit that he had duodenal ulcer, but he seemed to be skeptical and would not cooperate with me in the diet and general details that were outlined to him. He now asked if there was anything I could do for him. My answer was, "Yes, if you will do something for me!" He then said he would do anything to get well, or even to be able to resume his former work. I informed him that it would be absolutely necessary to have an x-ray of his intestinal tract. This he did the next day and which proved a correct diagnosis had been made and which satisfied the patient as to the need for the treatment. He has been under treatment for more than two years since this time co-operating in every detail and working every day.

Many different treatments are listed in text books for gastric and duodenal ulcer, and no doubt there is something valuable in all of them. However, it seems that each case is a law unto itself, and that we must not attempt the treatment of every case by any one set of rules. I try to find out from the patient just what he usually eats in his home, how it is cooked, if he can have all of the milk and cream he needs, how long it takes him to eat, if he rests after lunch, if there is any financial or domestic difficulties that are giving him very great concern, if he feels better before breakfast than before the noon-day or evening meal, and whether or not he is financially able to buy any foods that will be needed.

Coming to the surgical treatment of ulcer we are often confronted with a very difficult problem, and many times an error in judgment may decide between life and death for the patient in a very few hours. Of course there can be no argument as to what to do in perforation, or even in a case where this is probable. But we see cases where the patient is apparently doing well on medical treatment, or no medication at all, and without any warning he is in the midst of a tragedy almost unequalled in medicine or surgery. It seems to be one of the problems without a solution. However, there is one class of cases that should always be suspected of having perforation, and immediate surgery recommended as the only hope of warding off a calamity. This is the case where there has been one or more attacks of severe, or uncontrollable pain, or where an ordinary hypodermic of morphine and atropine does not give any or only slight relief. I have had three cases of this type and all have perforated sooner or later. It would seem fool-hardy to accept the teachings of some of our prominent surgeons and clinicians with reference to the surgical treatment of ulcer, for many have advocated surgery for every case. It is true as a rule that there is a rapid convalescence from the immediate operation, but does it means that the patient will continue to maintain good health, and be free from gastro-intestinal symptoms?

We can all recall cases that were treated

medically five, ten, fifteen, twenty years ago and a very large per cent of these people are apparently well. The danger of malignancy following ulcer no doubt has been greatly exaggerated, and this was one of the strong points in favor of operation by many of the older writers. The healing of an ulcer leaves scar tissue—just as the healing following the knife leaves a scar tissue. If there was danger of malignancy before, there is still danger. Is there any plausible reason why an ulcer might not develope at the site of incision following operation? When the profession comes to realize that ulcer requires more or less continuous treatment over a period of years there will be fewer recurrences and less need for surgery.

I wish to present a few case reports, but it will be impossible to go into detail in the short time allotted a paper at this meeting:

Case No. 1. (Mrs. W. K. Age 37. Weight 285 pounds.) Family history, negative as to any chronic diseases except that she had frequent attacks of sour stomach, or (so-called) heart-burn, for two years previous to my first visit to see her. She took a heaping teaspoonful or more of baking soda before and after meals, and sometimes between meals. She was seized suddenly in the night with alarming hemorrhage which seemed to come from the stomach. Bleeding had ceased when I arrived, but about this time there were great quantities of black clotted blood passed from the bowels. Patient had all the symptoms of severe hemorrhage, and was in a semi-conscious condition. I saw her frequently for more than two years and during this time she vomited more or less bright red blood, and passed great quantities from bowels. Advised and insisted on an operation but could not get consent of patient or family. She was under treatment more or less constantly for more than four years, and would not take more nourishment than a glass of milk and a few crackers in twenty-four hours for weeks at a time. She lost one hundred and fifty pounds in weight during this time, but now weighs more than two hundred pounds, eats of any and every thing she wants, has no discomfort of any kind and takes no medicine. Ten years have elapsed since symptoms came on in this case. Diagnosis is that of gastric ulcer which to all intents and purposes has healed, and will stay healed.

Case No. 2 (Mr. M. G. Age 55. Weight 160 pounds). Family history negative as to any chronic diseases, excepting one brother who died of some stomach disorder. This patient consulted me on several occasions for vomiting of his noon-day and evening meals. This had been going on for about five weeks. He gave no history of any former stomach or food discomfort, but had lost fifteen pounds in weight during this time. Patient said he felt very well when the stomach was empty, but would experience a fullness and nausea shortly after eating. The vomitus consisted of food and great quantities of mucus and occasionally streaked with blood. He had not experienced any pain at any time either before or after taking food, nor did his general appearance indicate any serious illness. A mass could be made out about the pyloric end of the stomach and carcinoma was suspected. X-ray of stomach and intestinal tract by one of the best radiologists in Cincinnati revealed a large mass at the pyloric end of the stomach, and a diagnosis of inoperable carcinoma was made. Patient was told that he had a growth in his stomach, but we could not be certain as to the exact nature of it. The vomiting became more and more infrequent and in six months had entirely ceased. Patient regained his former weight, eats any and everything, works every day, and seems to be in the best of health. There have been no more radiograms of the case but the mass has disappeared as far as palpation is concerned. The patient, no doubt, had a gastric ulcer with an unusual amount of induration, or thickening of the muscular coats of the pyloris that caused the obstruction and the palpable mass. Seventeen years have elapsed since symptoms came on in this case.

Case No. 3. (Mr. V. P. Age 56. Weight 135 pounds,) Family history. One brother operated for appendicitis three years ago, but continued to have more or less vague pains about the stomach and intestines. Was called to see this case, that is, Case No. 3, on two different occasions and found him suffering from symptoms of appendicitis. Advised operation, but he said he had been treated by another physician for several attacks just like this one, and had always recovered in two or three days. Three years after this I was called again to see this same patient, and found him in great shock. His pulse rate was fifty-six and thready and weak. Respiration sixteen. Skin cold and clammy. Almost incessant vomiting, face almost ashy white, thighs flexed on abdomen, temperature ninety-seven, and board-like rigidity of all abdominal muscles. The pain was so great that a half grain of morphine gave but slight relief from pain, nor was there but little relaxation of abdominal muscles. A diagnosis of perforated duodenal ulcer was made and insisted on an immediate operation. Patient and family hesitated. Then I asked for council. Consulting physician would not commit himself as to the diagnosis, but admitted that it was surgical case. Patient was operated about ten hours after beginning of first symptoms in this

last attack and a perforated duodenal ulcer was found. Also many adhesions about the appendix. Appendix was removed, and patient was almost ready to leave the hospital when he died almost instantly from a pulmonary embolus.

Was called in consultation with another physician in about three years after this to see this patient's brother. He had his appendix removed some two or three years before this, and was thought to be suffering from intestinal obstruction due to old adhesions about the incision. After obtaining a history from patient and family of his lunching between meals, and of his hunger and weakness being relieved by taking a glass of milk and a few crackers, and also of a board-like rigidity of abdominal muscles, a diagnosis of perforated duodenal ulcer was made. Patient was operated in a few hours after this and diagnosis confirmed. Patient died in about eight days following operation.

Case No. 4 (Mr. J. J. Age 45. Weight 225 pounds.) Family history not important. Patient gave no history of digestive disturbance except he admitted that he took a dose of baking soda occasionally. Asked why he did this he said that he took it for heartburn. While operating a mowing machine he was suddenly seized with such agonizing pain that he fell from the mower and was not able to summon help. There was no one near him, and his pain was so great that he could not make an outcry loud enough to make anyone hear. Finally some member of his family found him and I was called to the field to see him. Found him drenched in a cold sweat, face pale, pulse sixty, respiration sixteen, thighs flexed on abdomen, fingers clenched in palms, board-like rigidity of abdominal muscles, frequent vomiting, temperature ninety-seven per rectum, and everything that goes with severe shock. Gave hypodermic of morphine Gr. 1-4 and atropine Gr. 1-150 with no relief. Repeated in thirty minutes with same dose and patient had considerable relief after second injection. This being my first call to a case of this type I was somewhat perplexed as to just what had happened to this man, and asked for council. Neither of us could reach any definite conclusions as to the diagnosis, but persuaded him to go to the hospital. The surgeon and internes went over him very carefully and yet, only a tentative diagnosis was reached. Abdomen was opened and an unusually large, perforated duodenal ulcer was found. The tissue surrounding the ulcer was so necrotic that stitches would not hold, so it was patched with a piece of omentum just as one would sew a patch on a piece of cloth. Patient had a stormy time for a few days, but made an uneventful recovery, and has been a hard working farmer for the past twenty years. Eats of any and everything he wants, and has no discomfort relative to his digestion.

To summarize, there are a few points worthy of remembering:

First; that because a patient suffering with gastric or duodenal ulcer should become free of symptoms in a short time after treatment is instituted is no reason to think that the ulcer has healed.

Second; that it is important to differentiate clinically between gastric and duodenal ulcer, and the most helpful diagnostic points are these: The duodenal ulcer is much more frequent in the male sex, the characteristic hunger when the stomach is empty, and the location of the tenderness or pain to the right right of the median line.

Third; that it is almost useless to try to effect a cure in any of these cases unless the patient will cooperate in every detail.

Fourth; That one or more attacks of uncontrollable pain in a patient who has gastric or duodenal ulcer should be at once cause to suspect a perforation, and to recommend immediate surgery.

Fifth; That the general appearance of the patient may be excellent and there may have been very little or no discomfort and yet like a flash of lightning from a clear sky a perforation may take place.

Sixth; That many vague pains about the upper half of the body may be due to gastric ulcer, and that the pain or tenderness from duodenal ulcer may very closely simulate that of sub-acute or chronic appendicitis.

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**The Aschheim-Zondek Reaction.**—According to Mandelshtam and Kaplum, the Aschheim-Zondek test was accurate in 98.3 per cent of their cases of early pregnancy. The test proved of considerable practical value in cases in which pregnancy was complicated by the coexistence of a myoma or an ovarian cyst. It proved to be of even greater value in the differential diagnosis of extra-uterine pregnancy from inflammatory swellings of the adnexa. A positive test favors definitely an extra-uterine pregnancy, while a negative does not entirely rule out the existence of an extra-uterine pregnancy with a lowered hormone activity of the trophoblast (dead ovum). Operative intervention is indicated in these cases if the reaction is positive. When negative, the question of intervention must be decided by the clinical picture. The chorio-epithelioma reaction of Aschheim-Zondek proved to be valuable in case of hydatid mole.

# OFFICE TREATMENT OF EYE INJURIES BY FAMILY PHYSICIANS WITH SOME SUGGESTIONS AS TO WHAT TO DO AND WHAT NOT TO DO*

R. W. Bledsoe, M. D.

Covington.

Once upon a time when I was a student, (which I really tried to be) I occupied a small area on one of the hard benches at the old Cincinnati Hospital during a surgical clinic by our highly revered dean, Dr. N. P. Dandridge.

All had been so quiet for many minutes that a pin dropped upon the floor would have been very noticeable—when suddenly our skillful demonstrator who was a chubby gentleman with very short neck, straightened up with scapel in hand, took a long breath—and said in a very sincere tone of voice, "Gentlemen, cleanliness beats Godliness all to hell in our business," and immediately dropped back to work on the torso of somebody. Gradually a faint snicker was perceptible, from one part of the amphitheatre, then another, and in a couple of minutes it became general. The old gentleman looked up quite surprised and inquired of the interne the cause of the merriment. When enlightened he looked at us and smiled as only he could do, and said, "that's a profound truth" and resumed his whittling.

Gentlemen, in opening this subject I do not believe that it is possible for me to improve upon dear old Dr. Dandridge's words, even when injury or disease of the eye is under discussion, so please be advised that my hobby is cleanliness.

In only one hospital or clinic have I seen my ideas on this subject fulfilled and that was at the Ford Hospital in Detroit. I say this with no criticism of any other hospital or clinic or practitioner. We all have different ideas and technique which is agreeable to us but may not be preferred by our neighbor, as it were.

I have written this paper with the idea of possibly being of some little service to the man who has not ready access to the services of an eye specialist, and is compelled to take care of eye injuries, often against his wish. Therefore I shall not be surprised if my humble efforts do not appeal to the majority present.

I think probably the most common, likewise the most serious injuries to the eye occurring in the rural districts is penetrating injuries of the cornea, by the buckthorn, sharp weed stalks, stick of wood, small piece of rock, flying nail, etc.

Gentlemen, these are always serious injuries, and must be so considered even when upon inspection the lesion may apparently be trivial. I have had the misfortune to be compelled to remove more than one eye damaged by a very small piece of stone striking the cornea, while a person was breaking rock. The abrasion being small, the injury is neglected, corneal ulcer is followed by panophthalmitis and the eye is lost.

By educating your families to immediately seek treatment there will be very, very few complications follow, where the primary injury is trivial. Prompt and thorough cleansing, (the method to be referred to later), is really a stitch in time and usually means one office treatment and a normal eye in 24 to 48 hours, instead of, at best, several office treatments, much suffering and inconvenience when the case is neglected.

I have for your inspection a Berger Loupe which should be in the office of every man who even attempts to remove the most simple foreign body from the cornea or under the eyelid. I can say with much emphasis, that it is unpardonable for any doctor, no matter how good his eye sight, to remove any foreign body from the eye without proper visualizing same with the aid of this instrument, which magnifies objects very much. Moreover by its use one can readily see the foreign body and with an eye spud or point of a small bladed knife, remove the object without so much unnecessary damage to surrounding corneal tissue as is frequently evidenced in the office of every man doing eye work. Frankly, my principal idea in writing this paper was to stress this Berger Loupe and encourage its more general use. I might add, that they are mighty fine to use when removing a small splinter of wood in the skin or under the finger nail, you save your patient much unnecessary agony by going right after the splinter and not digging around into the adjacent tissues, which is painful.

Penetrating injuries of the cornea or eyeball are always serious and should be referred to some eye man. However, you can and should do something "right now" that may be the means of eventually saving the eye, and that something is cleanliness to be referred to later. It is safer to have x-ray plates made in penetrating injuries to confirm or rule out the presence of foreign bodies inside the eye ball.

Magnetic metals, as iron and steel may be removed with powerful magnets made for this purpose, whereas those which are non-magnetic, as lead, aluminum, and copper, also splinters of wood must be removed with fine forceps, which is much more easily said than done.

We fear most of all foreign bodies of copper because this metal seems to be particular-

*Read before the Campbell-Kenton Medical Society.

ly irritant to the eye or to develop some chemical irritant which lowers the resistance of the fluids or tissues of the eye ball.

No matter how small a piece of copper enters the eye ball, if it is not promptly removed panophthalmitis sooner or later develops necessitating enucleation of the eye ball.

In caring for the average eye injury which comes to your office, such as foreign bodies, cinders, scratches on the cornea etc., with pain and lachrymation, the first thing to do is to stop the suffering. No doubt most of you have a bottle of cocain solution of questionable age from 2 to 10 per cent strength, to be used in eye injuries, irrespective of age of patient.

Permit me to plead against the indiscriminate use of cocain in such cases. Its use is permissible in younger persons, but after the age of 35 or 40 I would not use it, because we know that cocain has brought on glaucoma in eyes which are susceptible and there is no way of telling this before hand. In younger persons 2 to 4 per cent solution of cocain hydrochloride may be used, a drop or two at a time for 2 or 3 doses. There are substitutes which are just as efficacious and void of these dangers, one of which is a 2 per cent solution of Butyn, 1 or 2 per cent Holocain, or 1 or 2 per cent Pantocain. Two drops of either of these instilled into a painful eye, say at 1 minute intervals for 3 doses will usually stop all suffering.

When the eye is comfortable the lid muscles will be thoroughly relaxed and no resistance offered by the patient, so that a thorough inspection of the eye and a diagnosis can be made. If it be a foreign body, it can now be removed with full co-operation of the patient. When the foreign body is removed, or if it be a cut or scratched cornea, we now begin our methods of cleanliness referred to earlier in the paper.

If you would prefer to wash out a gutter in the street with a quart of water and a teaspoon, then *don't* do as I suggest.

My advise is to spread the eye lids apart as far as possible and while the patient alternately looks up and down, with a large medicine dropper or undine wash out the eye thoroughly with 1 or 2 ounces of warm saturated boric acid solution, made with distilled water or normal salt solution or hypertonic alkaline solution. If your local anesthetic solution is reasonably sterile you may now put in a few drops to prolong the comfort. Instill a weak, 1/4 to 1/2 per cent yellow oxide of mercury ointment, and cover the eye for at least a few hours, in the mildest cases.

There is much more I would like to say but time does not permit. However I cannot resist the parting shot in warning against the indiscriminate use of atropine which by the way is not as commonly used as is the cocain.

If you ever have the unhappy experience of seeing a case develop glaucoma following the use of either of these drugs, you will indeed be very much impressed, and sad for the patient.

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## CONGESTIVE HEART FAILURE AND THYROIDECTOMY*

W. O. Johnson, M. D., F. A. C. S.

Louisville.

Of the many cases of congestive heart failure there are as yet only two groups in which thyroidectomy is advocated as a method of treatment.

I. Congestive heart failure in thyrotoxicosis.

II. Carefully selected, non-specific or progressive heart failure when other therapeutic measures are unsatisfactory.

By congestive heart failure, we simply mean the evidence that the heart is failing to remove the blood from the veins as fast as they fill. This may eventually result in a venous congestion and manifest itself by the following signs:

(1) From congestion of the pulmonary veins, producing cough, expectoration, orthopnoea and rales at the lung bases, with diminished vital capacity of lungs.

(2) From a congestion in the systemic veins, producing enlargement and tenderness of the liver, congestion of peripheral circulation and as a result of this, oedema of dependent parts.

We know that these two systems usually are simultaneously involved. When both are affected, exercise exaggerates the symptoms, thereby giving rise to the characteristic symptoms of breathlessness, palpitation of the heart, and oedema.

I. Since 1786 when Parry first recognized the association of enlargements of thyroids with palpitation of the heart, many clinicians believe that a visible or palpable goitre is indispensable in order to make a diagnosis of hyperthyroidism.

There are, however, a group of patients suffering from heart failure who may not manifest the cardinal signs of hyperthyroidism, and yet they are suffering from thyrotoxicosis. This group is important because many invalids from heart disease, as well as the death rate from congestive heart failure can be materially lessened if the true nature of their illness were discovered.

We know that thyroid toxicity has a different effect upon the hearts of different peo-

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ple; in some it presents definite and seemingly specific heart damage and is one of the few diseases that tends to affect the heart seriously. However, in over two-thirds of definite toxic cases, aside from rapidity of rate, one can find no serious heart changes.

In about 9 per cent of thyrotoxic cases there is evidence of other organic heart lesions. Under ordinary circumstances these cases may remain compensated, but the increased metabolism of the thyrotoxic states brings about an increase in heart strain which eventually terminates in heart failure. Heart failure in thyrotoxicosis is not limited to those previously damaged hearts, but is greatly dependent upon the individual cardiac susceptibility of the thyrotoxic patient.

Thus the diagnosis of congestive heart failure from thyrotoxicosis is difficult. The patient may be thyrotoxic and present evidence of cardiac decompensation in the absence of the cardinal symptoms of hyperthyroidism. There are no constant criteria upon which these cases may be differentiated.

In the majority of such cases there is a prolonged history of cardiac disability or decompensation, even before the possibility of thyroid toxicity is suspected.

Cases with predominant heart symptoms from thyrotoxicosis may be divided into three groups.

(1) Individuals with sudden brief attacks of heart disturbance which may be frequently repeated. These may be interpreted as paroxysmal attacks of auricular fibrillation, and this in itself is suggestive of the presence of thyroid toxicity.

History No. 1.: O. H., 35 years of age, male; 10-5-33: Two years of attacks of rapid heart; one year heart rapid, irregular at times, unexplained attacks of diarrhoea, oedema, partial cardiac invalidism six months, good appetite with progressive weight loss, nervousness; heat and high altitudes detrimental, progressive weakness; no exophthalmus or visible thyroid; blood pressure 140/76, pulse 120, basal metabolic rate, plus 18; improved with iodides.

On 10-25-33: Thyroidectomy; moderate reaction. Pathology: hyperplastic thyroid with involution. Convalescence most gratifying.

(2) More severe cases which have had periods of disability from congestive heart failure with temporary relief from drugs and apparently symptom free, which suggests the relapses of thyroid toxicity as influencing the heart.

History No. 2.: C. H. S.: age 54, male; 1-3-29: Four years of palpitation and heart irregularity; dyspnoea, oedema; patient had repeated attacks of cardiac decompensation and only able to work two weeks at a time, worked about one and one-half years out of four; improved at first with iodides. Thyroid palpable, pulse 96, auricular fibrillation, oedema; basal metabolic rate plus 25; blood pressure: 132/76.

1-6-29: Thyroidectomy; moderate reaction. Pathology: hyperplastic thyroid. Returned to work in sixty days, has worked steadily since. Basal metabolic rate at end of one year is minus 3.

(3) The largest group, which has signs of congestive heart failure does not respond in usual manner to rest and digitalis, although these hearts do not rapidly deteriorate. The patients have prolonged periods of invalidism for months or years before death:

History No. 3.: W. C., Female, age 65; small thyroid adenoma for years; two years of palpitation of heart, arthritis, dyspnoea, weight loss, nervousness; six months confined to bed because of cardiac decompensation, temporary relief with iodides, pulse 120, systolic murmur; blood pressure: 140/90; no preoperative basal metabolism; hypertrophic arthritis generalized.

12-26-31: Thyroidectomy; stormy convalescence. Pathology: hyperplastic thyroid. Basal metabolic rate at end of one year, minus five. Patient after two months, has been up and about supervising work, with improvement in arthritis, and compensation of heart.

In all such cases one must be alert to suspect the diagnosis of hyperthyroidism on symptoms which have previously not been given due importance, this is especially true in the absence of palpable or visible thyroid or exophthalmus. One must give more than the usual attention to apparently minor findings that in the cases of frank exophthalmic goitre are of little importance in the diagnosis of the malady.

Some of the findings are as follows: an alert patient, with warm, moist skin, which has an increased pigmentation of skin over exposed parts, and premature greying of the hair; an unexplained loss of weight with good appetite and even bed rest; also unexplained diarrhoea; slapping, clear heart sounds with perhaps an unaccountable systolic murmur in the absence of accompanying diastolic murmur; vibration of apex beat tendency to hypertension with increase in pulse pressure, and most important, transient attacks of auricular fibrillation and the failure of the heart to respond to digitalis therapy as true cardiacs should. A striking feature is the satisfactory therapeutic results in such cases with the use of potassium iodide or Lugol's solution.

The basal metabolic rates are of little help in such cases. The presence of elevation of metabolism to plus thirty is of little significance in such cases however over a plus forty,

the basal metabolic rate cannot be attributed to heart disease alone, and is most suggestive of an element of thyrotoxicosis. In many instances the basal metabolism rarely reaches plus 35. This confuses more than it helps in the differential diagnosis.

One may then see from the above cases that there are no constant diagnostic symptoms. One can obtain a clearer understanding by a composite picture of such a patient:

A grey-haired woman of about 50 years of age, without exophthalmus or visible goitre, who has lost considerable in weight, not mentally overactive, but with a tendency toward depression or apathy, prefers to remain quiet and not exert herself; digital tremor not marked, pigmentation of skin present, with enlargement of heart that is fibrillating, pulse rate of 100 or over, systolic murmur, but diastolic murmur absent; has signs of congestive heart failure with oedema, orthopnoea, weakness, precardial pain, nervousness, and in spite of the usual medical treatment for congestive heart disease has not responded to prolonged rest and digitalis, diet, etc. and with the least exertion her symptoms are greatly exaggerated.

The influence of changes produced by the thyrotoxicosis upon the heart and blood circulation, with the associated metabolic increase will readily show the necessity of relieving such cardio-circulatory strains as soon as the diagnosis can be made. Some of these changes are: increase in blood plasma volume per kilo of body weight, increase in pulse rate, pulse pressure and blood velocity flow. With the increase in metabolism, there is a necessary increase in the vital capacity of the lungs which brings about an increase in the respiratory minute volume of the lungs. The above conditions necessitate an increase in the work of the heart which may already be working under a handicap.

With the above conditions arising as result of thyrotoxicosis and increased metabolism, let us analize more closely the cause of some of the symptoms found:

Palpitation of the Heart: The factors controlling the circulation seem to be the same as those controlling respiration, namely, changes in oxygen and carbon dioxide pressure and the changes in hydrogen-ion concentration. Changes in their ratio bring about an effort to compensate or re-establish a normal rate.

Increased metabolism means increased oxygen consumption. This necessitates a proportionate increase in the minute volume output of the heart to compensate for the increased need of oxygen, which if increased beyond the normal capacity necessitates an increase in the heart rate. This is known to the patient as palpitation.

Auricular Fibrillation: This seems to be the most constant disturbance in the masked forms of thyrotoxicosis. At first this is transient, and later becomes permanent. This condition is rarely found under twenty years of age; at 21 years it begins with 14 per cent and gradually ranges to 85.7 per cent of definitely toxic goitres at sixty years of age.

Auricular fibrillation has not been definitely explained, but is evidently associated with the effect of the toxins on an over-taxed heart. Such hearts respond to exercise by a disproportionate rise in the ventricular rate, with a delayed return to the previous resting rate. This delayed return is not only due to the abnormal heart mechanism, but to an additional, as yet unexplained, factor, which is probably the effect of the thyroid toxicity on the heart muscle. This delayed excitability after exercise is present in the same hearts after their normal rhythm has been restored by Digitalis or Quinidine.

The auricular rate is shown to fall in auricular fibrillation when the ventricle shows an abnormal rise in rate to exercise. In itself, this tends to increase the inefficiency of the heart which is expressed by pulse deficit, greater dyspnoea and failure.

Dyspnoea: In thyrotoxic patients can be explained on the basis of increased metabolism, with decreased bodily efficiency. These patients become more readily dyspnoeic because of:

(1) Handicap of increased basal gas exchange.

(2) Greater expenditure of energy to accomplish a given task, hence a greater degree of hyper-opnoea.

(3) Loss of efficiency of pulmonary bellows.

Add this to the associated cardiac disturbance and we can readily explain dyspnoea.

There is a relationship between the tendency to dyspnoea in cardiac patients and the vital capacity of the lungs. When the vital capacity of the lungs has been so reduced that dyspnoea occurs when resting in bed, this dyspnoea is more indicative of severe cardiac decompensation than the result of metabolic increase. When dyspnoea is absent at rest and present with exercise it suggests metabolic inefficiency.

Metabolic Changes: The metabolism in true heart conditions is not an essential abnormal type, as measured by direct and indirect methods. Patients with compensated heart lesions have a metabolism that is within normal limits.

In patients with cardiac decompensation, the metabolism may be normal, but it usually is increased to as much in some cases as a

plus 30. Above this, it indicates thyroid toxicity.

We have noted before there is a rather close constant relation between the basal metabolic rate and the velocity of the blood flow through the lungs. This shows that the velocity of blood flow is a fundamental unit of circulation and is susceptible to many changes, dependent upon the influencing factors.

We may then say that an elevation in the basal metabolic rate will increase in proportion the velocity of blood flow, which necessitates the increase in minute blood volume in the heart. These results, if sustained, cause cardiac strain.

The above cardiac changes have been exemplified by the cases presented, and have been rather conclusively demonstrated experimentally to show that cases of thyrotoxicosis, whether definite or masked, relief of the cardiac strain should be instituted as soon as possible to prevent congestive heart failure. Even if the heart is failing, most astonishing results may be obtained.

In the treatment of congestive heart failure from definitely proven thyrotoxicosis, thyroidectomy is advocated. Thyroidectomy, however, can only be done after a most meticulate pre-operative preparation of the patient, and the operation done when the heart is at its optimum state. Such thyroid surgery must be done in divided stages, and even then, the most experienced surgeon has records of over-estimation of the patient's recuperative powers. When surgery is possible the post-operative care brings into play the most exacting skill of the surgeon and the physician. The results, however, are so gratifying that any amount of care is justified.

In skilled hands the mortality is less than 2 per cent. The number of stages of the operation is rarely greater than in the purely toxic states, and the end results are even more satisfactory.

II. The second group of patients is in reality an outcome of the satisfactory results obtained by thyroideetomy in the congestive heart failures associated with thyrotoxicosis.

With the establishment of constant relation between the basal metabolic rate and minute volume of blood flow through the heart, and the velocity of the blood flow through the lungs, this permits a more accurate study of cardiac cases.

Careful study and post-operative observation of thyrotoxic individuals and myxoedematous patients have shown that the adequacy of the circulation is evaluated only in relation to the metabolic demands of the individual patient. This demand is best estimated by the basal metabolic rate of the patient.

A cardiac activity might be satisfactorily compensated at normal metabolic rate, but with the elevation of this rate the circulatory mechanism is inadequate and, if sufficiently prolonged, insufficiency and failure ensues.

In a carefully selected group of cases, with apparently normal thyroids, who have been observed over a considerable period of time, and have failed to respond satisfactorily to the usual therapeutic measures, Levine, Blumgart and Berlio, in such cases, performed a total thyroidectomy, special care being taken to avoid injury to the parathyroids. The operative mortality and reactions following these operations were surprisingly low. The clinical improvement in these cases usually paralleled the lowered metabolism as evidenced by the disappearance of the oedema, compensation of heart, which had not been possible before, and the increase in vital capacity of lungs. This simply implies that in these cases, the heart was unable to supply the blood to tissues in adequate amounts at the original basal metabolic rate, but with the lowering of the metabolism of the tissues, the capacity of the heart was then capable of supplying the required demands, even with exercise. Such compensation of the heart may also relieve the anginal pain from cardiac exhaustion or prevent exaggeration of a quiescent coronary disease.

Some of the contraindications to total thyroidectomy in such cases are: advanced arteriosclerosis, impaired renal function, syphilitic cardio-vascular disease of active rheumatic or other infections; known cases of advanced coronary sclerosis with progressive degeneration of the heart must always be ruled out.

When cases are properly chosen this offers much hope and comfort to otherwise cardiac invalids, and so far the results seem to justify the risk taken.

There are conditions that are brought about by such radical procedures which only time can evaluate. In spite of the care in protection of the parathyroids there will be cases of parathyroid deficiency. The post-operative myxoedema which is produced may be controlled by thyroid medication. Will this medication prevent the occurrence of the associated secondary anemia and cardiac enlargement? Will the arteriosclerotic changes progress more rapidly in such cases? As yet, this step is in its infancy, but may prove to be of great comfort to pathetic cardiac cases.

## Summary

(1) Presentation of three types of thyrotoxic congestive heart failures with an advocation of more careful investigation of prob-

able thyrotoxicosis in heart cases, and thyroidectomy in the treatment of such cases when definitely proven.

(2) The constant relationship between the basal metabolic rate and the velocity of the blood flow through the heart and lungs permits a more accurate study of cardiac cases and a better explanation for some of the associate symptoms.

(3) The results obtained in purely thyrotoxic congestive heart conditions leads the investigative mind to the therapeutic production of a lower basal metabolic rate by a total thyroidectomy. In properly selected cases of cardiac decompensation that have failed to respond to general methods of treatment, such radical procedures open new avenues of approach in a group of pathetic cases.

## THE ASCHEIM-ZONDEK TEST FOR PREGNANCY*

W. H. Allen, M. D.
Louisville.

A method by which pregnancy might be determined in its early stage before a clinical diagnosis is possible has been sought through many generations.

J. Manger states that an old Egyptian papyrus at the Berlin Museum reports that the ancient Egyptians placed spelt and barley in a container with earth and watered it daily with the woman's urine. If the grains sprouted, pregnancy was believed to exist and it was also believed the sex of the child could thus be determined. The author in support of this, investigated the effect of urine of pregnant women on wheat and barley grains and found that the more rapid growth of the barley as compared with the wheat signified a female child. His diagnosis was correct in 80 out of 100 cases.

Popoff and Dimitrowa also have demonstrated the accelerating action exerted by the urine of pregnant women on the germination of plant seed and yeast fermentation, but have been unable to find a test for pregnancy, based on such stimulation, which does not present insurmountable difficulties.

Such a test however utilizing the cell stimulating action of the urine of pregnant women has been worked out, introduced and universally accepted by the medical profession.

In 1927 Ascheim and Zondek, knowing that the maternal tissues received special stimulation during pregnancy, injected infantile female mice with the extracts of some of these tissues and within about 90 hours they found that 98 percent of the mice injected with extract of the anterior pituitary showed definite vaginal and ovarian changes. Learning that the anterior pituitary becomes overactive from the day of conception and that its hormone appears in the urine on the fourth or fifth day, they injected female mice with the urine of pregnant women and obtained similar results. The early period within which this hormone appeared in the urine and the high percentage of accuracy when tried on known pregnant cases established this reaction as a means of diagnosing pregnancy before clinical symptoms appeared and it is now universally recognized.

Finding some difficulty in getting and handling mice, many laboratories are using female rabbits, first tried out by Friedman, and reporting equally as high or higher percentage of accuracy as with mice.

Others have used the male rabbit, feeling that a possible error may be eliminated here as in the male, the reaction consists of hypertrophy of the interstitial tissue of the testicle, of the seminal vesicles and prostate, in the female the reaction consists in maturation of follicles, hemorrhagic spots and false corpora lutea, the last two only being characteristic of pregnancy.

Moser and Hoffman feeling that the urine of pregnant women contains other hormones than that of the anterior pituitary have directed their experiments to Estrin or female sex hormone, a product of the ovary and feel that fewer false positives are given, though its appearance in the urine is not so early as the anterior pituitary so its value as a diagnostic agent is not so great.

The hormone of the anterior pituitary appears in excess shortly after conception reaching its peak in about two weeks and disappears 5 to 10 days after delivery if the placenta is expelled as a whole. If the placenta is not completely expelled and portions of it remain attached the anterior pituitary homone continues to be thrown out and the Ascheim-Zondek test remains positive. Likewise in case of a hydatid mole or chronic epithelioma the test is positive and has proven of great value in determining whether or not the uterus has been completely cleared of an expelled or curetted mole or the system relieved of a proven chorionic epithelioma.

Ascheim was first to recognize the value of the test in the diagnosis of hydatid mole and chronic epithelioma and reported a positive reaction in a chorionic epithelioma of the kidney 18 months after a hysterectomy. In another case in which the diagnosis of chorionic epithelioma was made from the curettage of a bleeding uterus, the Ascheim-Zondek test was negative. The patient remained well over a period of time proving the microscopical diagnosis in error.

Many other similar reports are made by

*Read before the Shelby County Medical Society.

different authors in which the Ascheim-Zondek reaction was of great value in making the diagnosis and determining the future outlook of the patient.

Rosenstein reports a very interesting case of a woman 28 years old from whom a hydatid mole was removed January 12, 1932. The next day the Aschcim-Zondek test was definitely positive. The patient was discharged from the hospital on January 23, but on February 6th, curettage was done on acount of bleeding. The Ascheim-Zondek reaction was negative at this time. On April 9th, curettage was again done on account of bleeding. The histological diagnosis was negative for chorionic epithelioma but the Ascheim-Zondek reaction was positive. On April 29th, a removal of the uterus was done, the right tube showing a small nodule which proved to be a chorionic epithelioma. The Ascheim-Zondek test in May, June and July were all still positive and on July 23, a pulmonary metastasis was discovered.

It is interesting that the Ascheim-Zondek test was negative between the removal of the hydatid mole and the appearance of the chorionic epithelioma.

As stated by the author after the removal of a hydatid mole the Ascheim-Zondek test should be repeated at intervals for several months. Also that when the test remains positive longer than four weeks following the removal of a chorionic epithelioma a recurrence is to be expected.

The Ascheim-Zondek reaction is of value in diagnosing the pathological conditions that sometimes follows the retention of the tissues of pregnancy as well as diagnosing normal pregnancy and differentiating pregnancy from other possible pelvic conditions. Zondek feels that he can differentiate normal pregnancy from hydatid mole or chorionic epithelioma as the stimulation of the two latter seem to be much greater than normal and the urine contains larger amounts of the hormone than in normal pregnancy. Each liter of urine contains from 20,000 to 30,000 units of the hormone in normal pregnancy while in hydatid mole or chorionic epithelioma the urine contains from 40,000 to 2,000,000 units and he feels that 50,000 units or more per liter is indicative of neoplastic changes. It is reported that 1/300 cc of urine contains sufficient hormone in case of chorionic epithelioma to bring about the diagnostic reaction, while for a diagnosis of normal pregnancy we inject 8-10 cc.

The value of the test in differentiating pregnancy from other possible pelvic and abdominal conditions, cannot be over-estimated for often it is of service in deciding whether or not an existing mass is tubal pregnancy and probably determining a definite diagnosis before rupture.

Just as the rapidity with which this hormone is thrown out after conception is of value in diagnosing early pregnancy, the rapidity with which it ceases to be thrown out after delivery or separation of the placenta also is of value. A negative reaction a week or ten days after delivery denotes all is well and no living placental tissue is retained. A negative reaction during the normal term of a known pregnancy indicates some disturbance has taken place and a living fetus no longer exists, for a dead fetus though retained in the uterus gives a negative reaction within two weeks after death has occurred. It seems that only through the placenta the anterior pituitary receives this specific stimulation and only while the placenta is attached does it throw out this specific hormone.

The accuracy in diagnosing pregnancy through the stimulation of this hormone is well brought out in reports of different observers. In 2,368 cases reported by Robertson from 13 different sources the error was 1.47 per cent. In another report by Ware and Main of 1,102 cases by 11 different observers there were only 10 errors or an error of less than 1 per cent and the author states that some of these may have been technical errors.

My experience has been well in keeping with the above reports as I know of but two errors in 370 unknown cases in our laboratory and one of these I feel can be explained.

Using Friedman's modification of the Ascheim-Zondek test, a specimen of urine is gotten from the suspected pregnant case and 8 or 10 cc of a centrifuged specimen is injected into the marginal vein of the ear of a female rabbit. We prefer waiting 48 hours then the rabbit is killed by injecting air into the vein, the abdomen opened, the ovaries exposed and the reaction or lack of reaction determined.

Our first work was on known pregnant cases or cases known not to be pregnant and the results proved correct in every case. Since we have had 370 unknown cases ranging from the age of indiscretion, where the doctor hesitates to make known his suspicions, to the age of the early forties when the periods begin to fail and the question arises as to whether menopause is beginning or pregnancy exists. Cases in which the doctor is confronted with the proposition of determining whether he is dealing with a pregnancy or some pathology of the pelvis and cases in which he must determine whether the symptoms and findings are due to appendicitis or tubal pregnancy. Almost invariably the Ascheim-Zondek test has decided the question and its reaction has been borne out by

later developments.

A young woman recently married visits her doctor with pain in lower right quadrant, nauseated and vomiting and feeling she has appendicitis. The doctor is anxious to determine between the appendix or tubal pregnancy so has an Ascheim-Zondek test run which is positive and determines the diagnosis.

A diagnosis of a pelvic tumor was made and patient sent to the hospital for operation. The patient was prepared and operating room gotten ready when the surgeon decided to have an Ascheim-Zondek test run which was positive and the operation cancelled.

Curettings from a bleeding uterus proved malignant. Several pathologists of the city were in doubt as to whether the tissue was of placental origin or of the uterus. The Ascheim-Zondek test of the urine was negative which ruled out the possibility of placental origin.

A young married woman was out walking and began flooding. She was rushed home and the doctor called. Pregnancy was suspected though her history was not very accurate. The Ascheim-Zondek test proved negative. Later a second test proved negative. She was taken to a hospital and in several days a dead fetus passed which supported the findings of others that a dead fetus, though retained by the uterus no longer stimulates the production of the specific hormone and the pregnancy test is negative.

The above reported cases bring before us somewhat the value of the Ascheim-Zondek test not only in diagnosing early pregnancy but in differentiating pregnancy from other pelvic conditions. Ascheim also reports that malignancy of the testicle can likewise be determined. Dorn and Sugarman experimenting with young male rabbits by injecting them with the urine of pregnant women report that they correctly predicted the sex of the unborn child in 80 out of 85 cases. The urine of women bearing female children causing enlargement, congestion and premature spermatogenesis in the testicle of the young rabbit. The urine of the woman bearing the male child causing no such reaction. Our experience with this test has not been so favorable and others report a high degree of inaccuracy in their laboratories.

Though not directly connected with the Ascheim-Zondek test, the stimulating effect of the hormone found in the urine of pregnant women is well brought out in the report of a case by Brosius and Schaffer and it may justify mentioning.

A patient with atrophy of both testicles caused by having had mumps three years previously was beginning to show some physical and mental disturbance and on three different examinations showed complete absence of spermatozoa. An injection of anterior pituitary like principle from pregnant urine was given twice weekly and within two weks a definite increase in size and firmness of both testicles was noticed and at three weeks an occasional inactive spermatozoa was found. At six weeks numerous non motile spermatozoa were found and at nine weeks large numbers of actively motile spermatozoa were present. They report this condition has been maintained for eight months on 2 cc. of the anterior pituitary hormone every two weeks.

The stimulating effect of the hormone found in the urine of pregnant women is very definite and its presence can be demonstrated in some cases as early as a few days after conception. It is constantly found during the full term of pregnancy though in greater quantities during the first two weeks, gradually getting less until a week or ten days after delivery when it completely disappears. A positive reaction is diagnostic of pregnancy with a living fetus or some retained products of pregnancy which are still alive. A negative reaction can be mistaken and misleading if gotten too early after conception, or if the laboratory animal used is so young that the undeveloped ovary will not respond to stimulation.

Its small percentage of error is uniformly reported from all sources of investigation and it is recognized as being more highly diagnostic than any test performed in the laboratory. It is of great value in the diagnosis of early pregnancy before clinical signs have appeared.

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**Physical Foundations of Chest Roentgenography.**—Wilsey states that the sharpness of uitline of roentgen shadows of the tissues of the lung is governed chiefly by the movement of the tissues with the heart beat and the size of the focal spot of the roentgen tube. The mutual aljustment of these factors to produce the best resultant sharpness may be worked out by the analytic method of Bouwers. The application of this method to roentgenography of the chest indicates that, in the main, the times of exposure giving the best definition or sharpness of lung tissue are in the neighborhood of one-twentieth second. The analysis also shows that the best prospects for marked improvement in sharpness lie in the use of a rotating target line focus roentgen tube and in synchronization of the exposure with the phase of minimum movement of the lung, as proposed by McPhedran and Weyl. The latter procedure has the additional merits of permitting longer times of exposure, decreasing the power required of the roentgen machine and minimizing the distortion in the stereoscopic image caused by movement of the lung tissues between stereoscopic exposures.

# PITUITARY ADENOMA, REPORT OF CASE*

ALBERT E. LEGGETT, M. D.

Louisville.

History: White female, age 37, referred to me by Dr. Paul A. Turner for an examination of her eyes. Her chief complaint was marked impairment of vision and persistent headache that required an opiate to relieve. This headache was aggravated by use of eyes for near. She has not menstruated for past seven years and her sister states that her facial expression has changed within past few years. She has had her eyes examined each year for the past 5 years, her last examination was six weeks ago. The lens for left eye not changed at this time.

Examination: Lids negative, sac negative, conjunctiva slightly congested, iris blue, pupil 5 m/m round, reacts to light, accommodation and consensually. Tension each eye 18 m. m. hg Schiotz. Vision with correction: O. D. 20/40 blurred, O. S. hand movements at two feet. Vision without correction: O. D. 20/40, O. S. hand movements two feet. Present glasses: O. D. + 1.00 axis 90, O. S. + 1.00 —1.50 axis 180.

Fundus examination through dilated pupil: In the right eye, media clear, disc margins temporal side distinct, nasal side blurred, disc vertically oval, vessel ratio 2:4. The nasal half of the disc seems to have a slight odema. Physiological cup two diopters deep with lamina cribrosa sclera visible. The vessel tunnel is very distinct with a temporal shelving. In the left eye, media clear, disc margins indefinite throughout. There seems to be a granular appearance to the retina which projects irregularly on to the disc. The nerve head seems blanched and of a dirty gray color with the lamina cribrosa sclera plainly visible. There seems to be a definite atrophy. Cupping of the nerve head four diopters deep, vessel ratio 2:4. The entire retinia seems odematus.

CASE REPORT OF MISS L. I. MC.

Fields of right eye March 14, 1933 on Ferre Rand. Perimeter with 1° object and 7 feet c. p. illumination shows marked contraction for form and temporal hemianopsia for colors. No fields were possible on left eye.

Spinal fluid examination made by Dr. Harry C. Weeter as follows:

REPORT

Service—Dr. A. E. Leggett

Specimen—Spinal Fluid—Received 3-16-33

Report:

| | |
|---|---|
| Cell count, | 2 cells per cu mm |
| Globulin | No increase |
| Wassermann | Negative |
| Culture | Negative |
| Guinea pig inoculation | Pending |
| Microscopic T. B. | Negative |
| Sugar | 37.3 mgs per 100 cc |

Reduction in sugar may be the only finding in very early stages of Tuberculous meningeal irritation. If such is the case, symptoms should develop in a short time.

X-ray pictures were made by Dr. Joseph Bell and I will ask him to interpret these for us.

This patient was operated by Drs. Spurling and Jelsma April 17, 1933 and I will ask one of these gentlemen to discuss the surgical aspects of this case.

On May 9, 1933 a field study of the right eye showed considerable enlargement of the form field with most of the temporal defect eliminated for form. On September 9, 1933 another field study was made of the right eye at which time the form field was full with only a small color scotoma remaining in the lower temporal quarter. She could recognize a 1° object in the upper nasal field of the left eye.

This patient was refracted September 9 as follows: O. D. + 0.25—1.25 axis 180. This gave her distance vision of 20/15 full and Jaegers type + 0.50 at usual distance. Left eye no improvement.

This case is a striking illustration of the necessity of making fields in all obscure cases.

The x-ray findings made by Dr. J. C. Bell are as follows: Stereoscopic films of the skull made in the anteroposterior, posteroanterior and both lateral positions show extensive changes in the region of the sella turcica. The anterior clinoids are very small, sharp and are decreased in density. The dorsum sellae is absent and a faint area of calcification can be seen posterior to and above its usual location. The floor of the sella seems to have been destroyed and no evidence of the posterior two-thirds of what is ordinarily the area of the sphenoid sinus can be seen. This appears to be due to the fact that the floor of the sella has been eroded. The convolutional markings are moderately prominent for a person of this age. The pineal gland is calcified. It does not appear to be displaced. Nothing else of importance is seen.

## SUMMARY

Extensive changes were noted in the region of the pituitary fossa which I believe are due to the presence of a tumor, probably a pituitary adenoma. The calcium deposits noted suggest a relatively slow growing tumor.

## DISCUSSION

**P. A. Turner:** A picture made at the time

*Read before the Jefferson County Medical Society.

this patient was admitted to the Hazelwood Sanitorium about a year ago may be interesting, so far as the tuberculous condition is concerned. You will observe that there was considerable fibrosis throughout the upper lobe of the lung, with marked atelectiasis at the top and many cavities in the atelectic area. We felt that pneumothorax would improve her, but when we attempted it we found that only the lower part of the lung would collapse, and this procedure was abandoned. About a month later we did a phrenic neurectomy on the affected side, combined with a scaleniotomy and her condition rapidly improved. X-ray taken after this operation shows a slight rise of the diaphragm on the left side, which usually does not rise as high as it does after operation on the right side. The patient improved rapidly after this operation; her pulse and temperature became normal and she appeared to be getting well as far as the tuberculous condition was concerned. Then she developed the symptom which necessitated further investigation, which was a terrific headache that could not be controlled by medication of any kind. Dr. Spurling will enumerate the symptoms which finally led to the diagnosis.

**R. Glen Spurling:** Dr. Leggett has covered the essential details in the diagnosis of this case. With regard to the operation, I wish to say that an approach was made through a frontal bone flap. By working between the frontal lobe, the tumor mass was found to be presenting between the limbs of the optic chiasm. The capsule was incised, and the entire mass was evacuated with suction after first removing a specimen for microscopic study. Postoperatively, she had a very unusual complication. At the end of twelve hours, she began to vomit fresh blood. She also complained of severe epigastric pain, the pain radiating toward the shoulder. The vomiting of blood was so profuse that it was necessary to give her three blood transfusions. Finally, these acute symptoms subsided, and from that point on, she made an uneventful convalescence. At the present time, she is free of symptoms, and her eyesight has improved remarkably.

**W. E. Gardner:** I had the pleasure of seeing this patient through the courtesy of Dr. Leggett after he had completed his clinical examination and before x-ray examination was made.

Dr. Leggett is rather modest in saying that the condition proved to be a pituitary tumor at operation; as a matter of fact, I believe he had made clinical diagnosis of such a condition before the patient was referred to me. After going over the case and studying the record I felt that he was justified in his provisional diagnosis, and suggested that x-ray studies be made and the patient referred to a neurological surgeon. Examination of the spinal fluid which had been made at the suggestion of Dr. Leggett showed a low sugar content, and naturally he considered the possibility of some tuberculous process, but this was barely mentioned and not given serious consideration in view of the advanced optic atrophy, and the absence of other elements in the spinal fluid indicating an inflammatory reaction.

Regarding the classical sign of bitemporal hemianopsia in pituitary adenomas, one would assume that inasmuch as a marked temporal field defect was discovered in one eye, it was most probably present in the other eye previous to the onset of total blindness in that eye.

I had the privilege of seeing the operation which was beautifully done and the patient made an uneventful recovery, which was certainly a most gratifying result.

**A. E. Leggett,** (in closing): There are one or two points that I did not bring out in the report. One was the inverse ratio of the retinal arteries with the veins; it seemed to me that the veins were at least twice the size of the arteries, which indicated some degree of congestion. One might ask why there was not choking of the disc instead of the cupping reported. I think there was no damming back of the cerebrospinal fluid upon the optic nerve. As stated in the report, the cupping in the right eye was physiological, while the increased cupping in the left eye, which was about 2 dioptres deeper than in the right eye, was due to a descending atrophy of the fibres.

## A NEW METHOD OF TREATING PEPTIC ULCER*

FRANK M. STITES, JR., M. D.

Louisville.

Probably no subject in medicine has been so thoroughly discussed in the past forty years as has the management of peptic ulcer, and even today there are wide variances between medical and surgical groups as to the most efficacious method of handling the majority of cases. But because of the rather marked advance in both the surgical and medical methods of recent years and principally because of the very recent work along medical lines we plan to outline a course that in the hands of many has been most encouraging.

Most authorities feel that the upper hand in present day management has been gained by the medical men, because the improved methods of diagnosis and treatment have shown healing in a majority of both gastric and duodenal ulcers when carefully handled by medical measures and because such a large percentage of those cases treated surgically return for subsequent medical treatment. Certainly a fair summary would be to say that unless there are positive contraindications such as hemorrhage, perforation, etc.,

*Read before the Franklin County Medical Society.

that every case should be given the benefit of competent medical regime and also that all surgically treated cases should be entitled to the same attention post-operatively. Much could be written pro and con on this subject but the fore-going seems a fair basis to both groups.

In these cases emphasis should be laid upon a thorough comprehensive study of each case before outlining any treatment. Whether gastric or duodenal, its exact location, the presence or absence of other disease, especially focal infections, and a knowledge of the gastric content, retention from obstruction or pylorospasm and careful x-ray study as well as duration of symptoms are all very essential facts to be determined before any outline of treatment should be instituted.

Research along etiological lines during recent years has been voluminous and although no final work is out the consensus seems to point to an infectious origin. Therefore regardless of treatment instituted the proper preparation of the patient is most important.

Many methods of medical management of peptic ulcer have been devised, outstanding being Sippy's intensive alkalization and Lenhartz and Smithie's bland diets. All of these have undoubtedly been steps in the proper direction and have been given wide use but in the words of Dr. S. J. Fogelsen of Chicago, "The ideal therapeutic agent for use in combating the irritative action of gastric juice is one that will neutralize or combine with the acid without materially stimulating or depressing gastric secretion, without materially affecting gastro-intestinal activity and without having a general systemic action."

Taking the work of Pavlov and Ivy as a basis and feeling that from these physiological works the gastric mucus answered all the requirements for the ideal therapeutic agent, in that it combines readily with free HCl, that it plays a soothing, protective action and lastly it results in no chemical disturbance to the body. These points have been proven by such workers as J. E. Whitlow at Loyola University and presented in a thesis as yet unpublished, also by F. Klug in a physiological study as early as 1907.

In his preliminary report S. J. Fogelson summarized as follows:

1. Gastric mucin from hogs stomach is only a mild excitant of gastric secretion.
2. Gastric mucin has high combining power.
3. Relief from classic ulcer symptoms were obtained on patients treated with gastric mucin.

Several preparations of mucin have resulted from this work and the earlier products aside from being quite disagreeable to take, were not purified enough to eliminate the secretagogue effect and were therefore less efficacious than the more recently prepared powders. The best preparation at present is a straw colored powder which when mixed with water forms a mucilaginous mass.

This when taken into the stomach, preferably previous to a meal coats the stomach with this mucin substance and the irritating action of the gastric juice is thereby inhibited as well as slowing down the defusion of acid and gastric juice in the stomach. There is a high combining power and about 1 gm. of mucin neutralizes 12 to 15 cc of N/10 HCl. Many experiments in the laboratory have proven these points.

As a result of the experimental work there is now a fairly large amount of proof as to the clinical value of this new method. About some points there is naturally some difference of opinion but many features seem fairly definitely settled. As to the method of administration probably there is more controversy than about any other point, for the taste of our patients is quite variable and at best mucin is a rather unpalatable preparation. In our own work we find most patients prefer to take it as a dose of medicine, simply making a mucilaginous mixture with water. Various suggestions such as fruit juices, milk, malted milk, eggnog, ice cream, etc. have been used and these may be left to the discretion of the patient.

The time of administration is important but understanding the action of mucin as a protective coating to the mucosa and irritated areas it is natural to give the medicine prior to the ingestion of food. Our own experience has shown 20 to 30 minutes to be the period that gives best results and quickest relief from symptoms. If there is a persistence of symptoms after eating as sometimes occurs in the more severe cases it may be necessary to give subsequent doses between meals and in some cases as often as every hour it is given in 10 gm. doses. The usual dose to be given before meals is 15 gm. to 30 gm.

Another advantage to the use of mucin over other methods is the diet that may be used. In the usual cases a normal diet may be followed, avoiding only bulky articles such as vegetables with large amount of cellulose and also the usual cereals. In the severe cases it is advantageous to use some of the more common bland diets. These brief instructions are always quite welcomed by the patient as compared to previous dietaries which were annoying and very seldom consistently followed. The important idea about the diet is to suit one to the patient that will regulate a normal evacuation of the bowel. More usually mucin is constipating and in these cases an increase in fruits and

vegetables is indicated but occasionally a patient complains of a tendency to diarrhea and it is then necessary to restrict the more laxative articles of diet, especially the fruits.

Probably the earliest improvement noted by the patient is the relief from pain which is noted usually by the third day and this is the best method to judge the dose necessary for an individual patient. However in those cases which are somewhat slower to note relief from pain we find improvement if they are checked with the x-ray, in the fact that the spasm and deformity is so markedly improved in a short time. The following case beautifully illustrates this point and increased dosage soon relieved the pain entirely.

Mrs. M. aged 55, has been under management at various times for more than 2 years. Because of circumstances it had been difficult for her to follow the more exacting methods of Sippy's treatment and only temporary relief was secured. On the usual modified Sippy regime there was invariably a recurrence of symptoms. Both of these methods had caused a consistent loss of weight and just prior to the institution of her mucin treatment her symptoms were constant classical and almost severe enough to cause consideration of surgical consultation. A test meal revealed the following:

| | |
|---|---|
| Amount 30 cc | |
| Appearance chymified | |
| Free HCl | 41° |
| Combined HCl | 17° |
| Total Acidity | 83° |
| Blood 1 plus | |

X-ray study on December 27, 1932 showed a constant filling defect near the apex of the duodenal bulb with unusually rapid emptying for the type of stomach and hyperperistalsis offer sufficient grounds for diagnosis of early, non-obstructive duodenal ulcer.

Following this study the patient was given mucin in 15 gm. doses before each meal and allowed to follow the same diet previously taken with her alkali, namely a modified Sippy diet. There has been a consistent improvement and the patient has shown a gain in weight. On January 8, 1933 just 10 days after the previous x-ray there was a re-examination with the following report, "The stomach is somewhat hypertonic as previously reported but otherwise normal. The duodenal bulb fills promptly, retains barium well and shows a slight irregularity at the apex in some of the films but not on fluoroscopic observation. In comparison with the previous examination the most striking change is the complete absence of spasm. While one can not say that the ulcer is entirely healed, there is certainly marked improvement in the secondary manifestations and there is not at present sufficient grounds for a diagnosis of ulcer." (Signed) C. D. Enfield

We have ordered a slight increase in the amount of mucin in this case and removed most of the diet restrictions.

Thus far the only gauge for the amount of mucin prescribed has been the degree of acidity and the response to medication. However we have felt that it would be of advantage to check by fractional study the actual results from mucin and the following case rather clearly shows the advantage of this method.

This patient (a doctor) gives a history of symptoms for many years and feels that early adolescence was when the first trouble was noted. His treatment has been guided by himself and others but this fractional study was done by us with his kind co-operation. He gives a previous history of hemorrhage, transfusions, gastro-enterostomy and various diet and alkaline regimes. However for many weeks he has been on mucin with very few diet restrictions and on January 10, 1933 ate a full normal meal with no restrictions. After 30 minutes the tube was taken and fractional study at 15 minute intervals made as follows:

| | 30 minutes | 45 minutes |
|---|---|---|
| Free HCl | 45° | 50° |
| Combined Acid | 20° | 30° |
| Total Acid | 70° | 80° |
| Blood | negative | negative |

We then introduced 10 gm. of mucin and waited another 15 minutes for two further fractions.

| | 75 minutes | 90 minutes |
|---|---|---|
| Free HCl | 40° | 58° |
| Combined Acid | 25° | 30° |
| Total Acid | 75° | 110° |
| Blood | negative | negative |

This is a minimal dose and in this particular case was not sufficient to neutralize the acid. We then introduced 20 gm. more of mucin with the following results at 15 minute intervals.

| | 120 minutes | 135 minutes |
|---|---|---|
| Free HCl | 25° | 20° |
| Combined Acid | 25° | 18° |
| Total Acid | 55° | 50° |
| Blood | negative | negative |

This increased dosage shows considerable neutralization and we feel that it is quite important to know the degree of acidity in a given case before deciding upon the dosage required. The case quoted above needs about 30 gms. as a minimum dose three times daily and probably would do better on 50 gms. although it is a question of neutralization more than protection of the ulcer in this individual. In the original work by Fogelson he attempted to reduce the dose to 8 gms. t. i. d. but in most cases there has been recurrence of symptoms, if this is attempted too soon and 30 gms. t. i. d. is more nearly the accurate dose to

maintain freedom from symptoms.

The ultimate results at present are more or less problematical and sufficient work has not been done to show how long the use of mucin must be continued but certainly we have in this treatment an agent which offers at least an added help to the ulcer patient and with improvement in the substance itself as well as the other factors should be encouraging to all.

## INTERLOBAR PLEURISY*

J. Rowan Morrison, M. D.
Louisville.

Patient, female, age 10, first seen on June 19, 1933, for a simple cold. She had been in swimming and had sat around in her wet bathing suit and became chilled and her nose was infected. I saw her again a week later by which time she had developed a sore throat. He tonsils had been removed. She had a considerable amount of what Dr. Simpson, who saw her at this time, termed a post-nasal infection. Her appetite was very poor; temperature 100 to 101 F. She was put to bed and within four or five days developed marked swelling of the glands on the left side, and to a less degree on the right side. Temperature 103 to 104 F. in the mornings and 104 to 105 F. in the afternoons. There was no evidence of typhoid or appendicitis. White cell count remained practically normal. No signs of pneumonia or pleurisy could be made out with the stethoscope or by auscultation or percussion. In other words physical examination of the chest was negative. Dr. Jesse H. Simpson saw her and found evidence of a pharyngitis and post-nasal infection. She was kept in bed, fed well and sponged when the temperature was high.

Under this treatment the child improved somewhat and in spite of my advice to keep her in bed, was allowed to get up and take a bath and was taken to Dr. Simpson's office. I sent her to Dr. McNeill who made an x-ray of the chest and found that she had an interlobar pleurisy on the right side. Dr. McNeill will show you the pictures he has taken of the child since that time. The last one was made on October 10th, at which time the lesion in the right lung had almost entirely cleared up. The child had no fever after this condition was discovered but did have a persistent cough. She was taken to Atlantic City but was not allowed to go in swimming, simply resting. She picked up about five pounds in weight and had a good appetite. She came home and started to school, she forgot to eat and again lost weight. I stopped her going to school until she learned to eat regularly, which she did and gained back the five pounds.

My reason for reporting this case is that I believe inter-lobar pleurisy occurs much more frequently than we suspect, although it is regarded as of rather rare occurrence. I do not believe any one would have suspected the condition in this child from physical examination; it took the x-rays to make the diagnosis. I can remember the time when a man was considered dumb if he could not diagnose all chest conditions from physical examination but now he is considered dumb if he does not have careful x-ray examination made in such cases.

### DISCUSSION

**Jesse H. Simpson:** When I saw this patient the condition of the nose and throat was not an unusual one—a pharyngitis with perhaps little rhinitis. Very frequently we see coryzas or colds clear up promptly and the temperature becomes normal and there is nothing to be heard in the lungs, yet there is a persistent cough, sometimes with a little fever and sometimes without. In such cases x-ray examination should unquestionably be made. We may learn a great deal from it and then again we may not.

**Oscar O. Miller:** Every individual that comes to the tuberculosis clinic receives a thorough physical examination and then fluoroscopic examination of the chest in both the anterior and oblique positions. We suspect interlobar pleurisy in children where we find definite indications of a pneumonitis and in many instances upon fluoroscoping them in the lordotic position we find the typical wedge-shaped shadow projected upon the screen.

We have felt that all these interlobar pleurisies with effusion are tuberculous, but we have seen a number of cases in which we did not get a positive reaction from as high as 3 mg. of tuberculin and, therefore, had to conclude that they were not tuberculous but were due to an inflammatory exudate, probably fibrinous in character.

Physical examination in these cases is not altogether negative; we do find something in the way of physical signs but nothing conclusive.

**Jas. W. Bruce:** It has fallen to my lot, in the past year or two, to have seen several cases similar to the one reported by Dr. Morrison and I can corroborate his statement that physical examination usually reveals nothing, even after x-ray has shown just where the pathology is. The most prominent symptoms presented in the cases I have seen has been persistent cough following upper respiratory infection. These patients are not very ill, they do not have pain or other symptoms; they simply appear to be below par physically with a persistent cough. The parents usually think the child has whooping-cough, yet it does not whoop, and after this has gone on for several weeks or a month they begin to get worried about it and want something done.

*Read before the Medico-Chirurgical Society.

# Kentucky Medical Journal

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NEXT MEETING HARLAN, OCTOBER 1-4, 1934


## COUNTY SOCIETY REPORTS

**Jefferson:** The following is the May program of the Jefferson County Medical Society:

**May 7th—Case Reports**

Enlarged Prostate, E. S. Allen, M. D.

Lead Poisoning, Report of Cases, Margaret Limper, M. D.

**Address**

**Some Newer Aspects of Anesthesia,**

"A Discussion of the Barbiturates and Other Agents Used for Basal Analgesia, together with Methods and Agents of Denarcotization; a Brief Resume of Clinical and Research Observations," M. L. Axelrod, M. D., Cleveland, Ohio.

Discussion to be opened by Drs. John W. Heim, Wallace Frank and W. Hamilton Long.

**May 21st—Case Reports**

Peptic Ulcer Treated by Venoclysis, Report of Cases, Geo. A. Hendon, M. D.

Erythroblastosis in the New-Born, H. S. Andrews, M. D.

**Essays**

Allergy, Armand E. Cohen, M. D.

Vernal Conjunctivitis, A. E. Leggett, M. D.

CHARLES M. EDELEN, Secretary,
WALTER HUME, President.

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**Logan:** The Logan County Medical Society will be host for an Extension Course, given under the auspices of the Kentucky State Medical Association. This meeting will be held at the Court House, Wednesday, May 9, at 10:30 A. M. A fifty cent plate dinner will be served at the Woman's Club at noon.

The course will be conducted by Dr. Malcom Thompson and Dr. Winston Rutledge, of Louisville, who will alternate as lecturers for twenty minute periods. Quizzes and discussions will follow each lecture. A Skin Clinic will also be conducted.

**Program**

Principles of the Treatment of Wounds, Dr. Malcom Thompson.

Relationship of Dermatology to Internal Medicine, Dr. Winston Rutledge.

Lateral Splints in Fractures of Leg, Dr. Malcom Thompson.

Diagnosis and Treatment of Common Skin Diseases, Dr. Winston Rutledge.

**Afternoon Session**

Local Treatment of Contaminated and Infected Wounds, Dr. Malcom Thompson.

Fungus Infections of the Skin, Dr. Winston Rutledge.

Disability of the Shoulder, Dr. Malcom Thompson.

The Treatment of Pre-malignant and Malignant Skin Growths, Dr. Winston Rutledge.

All physicians in contingent counties are invited to this meeting and requested to bring skin cases for the clinic.

WALTER BYRNE, Secretary.

**Allen:** The Annual meeting of the Allen County Medical Society met in the office of Dr. A. O. Miller, Scottsville, March 16, 1934 with the following members present:

L. Graves, H. M. Meridith, G. R. Keen, W. E. Willoughby, C. W. Holland, C. A. Calvert, A. G. Cosby, and A. O. Miller.

Minutes of the last meeting were read and also the report of the Treasurer. Both were adopted. The following officers were elected for the ensuing year.

C. A. Calvert, President; L. Graves, Vice-President; A. O. Miller, Secretary-Treasurer; G. R. Keen, Delegate; H. M. Meridith, Alternate.

Meetings are held regularly on the fourth Wednesday of each month with luncheon at the Jacksonian Hotel.

A. O. MILLER, Secretary.

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**Caldwell:** Members of the Caldwell County Medical Society met in the office of the Caldwell County Health unit and elected officers for the ensuing year as follows: Kenneth L. Barnes, President; J. M. Moore, Vice-President; W. L. Cash, Secretary, re-elected; John B. Wadlington, re-elected, Delegate; W. P. Morse, Alternate; W. C. Haydon and J. O. Williams, members of Board of Censors.

W. L. CASH, Secretary.

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**Calloway:** The Calloway County Medical Society met on March 15, 1934 and elected new officers as follows: W. H. Mason, President; A. Y. Covington, Vice-President, and A. F. Russell, Secretary and Treasurer.

A. F. RUSSELL, Secretary.

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**Garrard:** At a called meeting of the Garrard County Medical Society the following physicians were elected to hold office for the year 1934:

W. M. Elliott, President; B. Earl Caywood, Secretary-Treasurer; J. E. Edwards, Delegate.

The Society plans to hold monthly meetings and to have a paper presented at each meeting with open discussions of the subject.

B. EARL CAYWOOD, Secretary.

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**Pulaski:** The first meeting of 1934 of the Pulaski County Medical Society was held in the offices of the Somerset Ceneral Hospital on January 18th, at 7:30 P. M. T. M. Garner, the new President for 1934, presided. Other officers for 1934 include: E. F. Beard, Vice-President; M. C. Spradlin, Secretary-Treasurer; W. M. Price, Brent Weddle, R. C. Sievers, Censors; Carl Norfleet, Delegate to State Society; M. C. Spradlin, Alternate Delegate.

Following the business meeting, each of the physicians present discussed the interesting or unusual cases which have occurred in their practices during the past month. Following this, Dr. E. J. Brown of Stanford, who was visiting the Society, was elected to honorary membership.

M. C. SPRADLIN, Secretary.

**McCracken:** At the meeting of the McCracken County Medical Society held December 20th the following officers were elected for 1934:

P. H. Stewart, President; Palmer H. Reed, Vice-President; E. W. Jackson, Treasurer; Leon Higdon, Secretary; P. H. Stewart, Delegate 1 year; H. G. Reynolds, Delegate, 2 years; E. B. Williams, Censor, 3 years; Harry Abell, Censor, 2 years; Errett Pace, Censor, 1 year.

Alternates are to be appointed by the President.

LEON HIGDEN, Secretary.

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**Livingston:** The Livingston County Medical Society met at Salem, January 5, 1934. All members having been previously notified by phone, of time and place of meeting.

John L. Hayden was elected President and Wm. C. Davis was elected Secretary and Treasurer.

The principal discussions were about C. W. A. and what we could do to help.

WM. C. DAVIS, Secretary.

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**Garrard:** The February meeting of the Garrard County Medical Society was held at the office of Dr. B. Earl Caywood, with the host as essayist of the evening. A paper on Diabetes Mellitus was given, which produced very interesting discussions.

The following members were in attendance: W. M. Elliott, J. E. Edwards, J. G. Kinnaird, B. Earl Caywood.

The local dentists were invited and the following attended: Dr. M. S. Hatfield, Dr. F. M. Elliott.

B. EARL CAYWOOD, Secretary.

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**Laurel:** The Laurel County Medical Society met December 20, 1933 and elected the following officers: H. V. Pennington, President; J. B. Mason, Vice-President; O. D. Brock, Secretary-Treasurer; Delegate, O. D. Brock; Alternate, G. S. Brock.

OSCAR D. BROCK, Secretary.

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Garrards: The County Medical Society met in its regular session on January 17, 1934. At this meeting officers for the year was elected. Dr. J. B. Kinnaird, who had served this Society as Secretary for almost forty years and who at the present time and for the past several months, has been unable to attend the meetings of the Society, requested that some one else be elected to fill his place. The Society realizing that Dr. Kinnaird felt that the work could best be done by one active in the Society and that his wishes were for the welfare of the society, we granted his request.

Therefore, be it Resolved;

First: That the Garrard County Medical Society appreciates the service rendered so faithfully and so willingly by Dr. Kinnaird.

Second: That we each separately and collectively extend our wishes for a speedy recovery from his confining illness and that we wish him to know that we shall think often of him in his declining years.

Third: That we who are practicing medicine in the communities in which Dr. Kinnaird has practiced for more than forty years wish to, tell him of the love expressed for him by those with whom we come in contact.

Fourth: That a copy of these resolutions be spread on the minutes of the Garrard County Medical Society, that one be sent for publication in the Journal and one be sent Dr. Kinnaird.

Committee: J. E. EDWARDS,
B. E. CAYWOOD.

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**Grant:** The usual meeting of the Grant County Medical Society met February 21, 1934 at the office of the Health Department in Williamstown, with the following members present: Drs. J. D. George, N. H. Ellis, C. M. Eckler, C. D. O'Hara, and C. A. Eckler and our visiting brother, and essayist for the evening, R. W. Bledsoe, Specialist on Eye. Ear Nose and Throat from Covington. In the absence of our President, our Vice-President, J. D. George, presided.

The minutes of last meeting were read and approved. All communications were read and acted upon in the usual manner, and the report of the committee appointed at the last meeting consisting of C. M. Eckler and C. D. O'Hara and unanimously adopted and the committee ordered further to continue their work and report their expenses next meeting. We now took up the program for the evening, introducing our worthy speaker, Dr. Bledsoe, who began his talk by stating that he expected his visit here at this time and was going to make it a perfect love feast. He had known most of the members present for some time and it was a great pleasure to him to be present at our meeting. He commented on the times, as advising us as how we should treat the worthy indigent who came to us now at this time and make them feel that they are not in the pauper class. He stated that selfishness had a great deal to do with this depression and urged brotherly love and tenderness. Compared the condition of the city with that of the country, making a most excellent talk full of pathos on the present conditions.

He now talked at length on his subject producing various phases, very interesting indeed and valuable to us as general practitioners. He invited questions and they were made by the various ones present which made the meeting all the more interesting. Dr. O'Hara now arose at this time and congratulated our brother and extended the invitation of our Society to have him meet with us again in the near future.

We now adjourned to meet the third Wednesday in March at the usual time.

C. A. ECKLER, Secretary.

## BOOK REVIEWS

NEW AND NONOFFICIAL REMEDIES, 1933, containing descriptions of articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association on January 1, 1933. Cloth. Price, Postpaid, $1.50. Pp. 498; lvi. Chicago: American Medical Association.

The annual editions of this volume contain all that the busy physician needs to know concerning the newer preparations which he is daily importuned by the detail men of the pharmaceutical manufacturers to use. The remedies listed and described here have been examined and found acceptable by the Council on Pharmacy and Chemistry, the deliberative body charged by the American Medical Association with the performance of this service for the practitioner, who has not the time or means to make the determinations for himself.

The book contains general articles, descriptive of the classification under which the various drugs are listed. According to the preface, more or less thorough-going revisions have been made of the articles: Arsenic Compounds; Dyes, Iodin Compounds; Liver and Stomach Preparations; Radium and Radium Salts and Silver Preparations.

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TREATMENT IN GENERAL PRACTICE: By Harry Beckman, M. D., Professor of Pharmacology at Marquette University, School of Medicine, Milwaukee, Wis. Second edition revised and entirely reset. W. B. Saunders Company, Philadelphia, 1934. Price, $10.00.

The first edition of this book was published in 1930 and was reprinted five times to satisfy the demand. In the second edition just published Doctor Beckman has included all that was known to be of value or that promised to be of value at the beginning of 1934. This well written volume on the treatment of disease as seen by the practicing physician satisfies a definite and urgent need. It does not enter into lengthy discussions of controversial questions but is practical throughout. The sections on amebic dysentery, agranulocytosis, diabetes, and allergic conditions are especially timely and valuable. The sections on tropical diseases also should prove of value to physicians everywhere. The wide-spread travel of the present day has effaced the boundaries of climate as well as of nations and those who practice in the temperate zones may at any moment be called upon to treat diseases which hitherto have been thought of as limited to the regions near the equator. The chapters on the reatment of the commoner skin diseases and the complications of pregnancy are well balanced and conservative. The entire book is pleasant as well as authoritative reading.

FREDERICK G. SPEIDEL.

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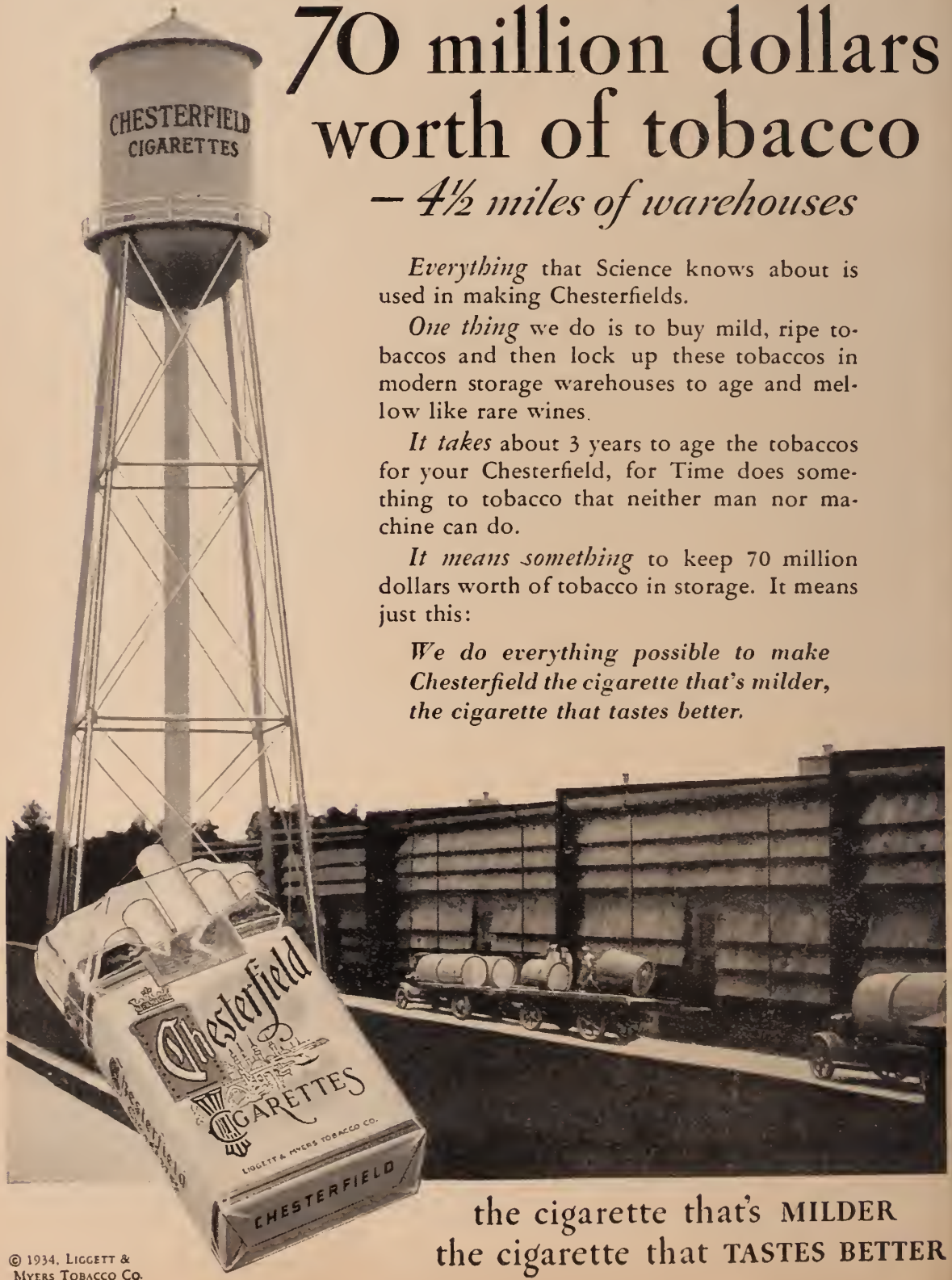
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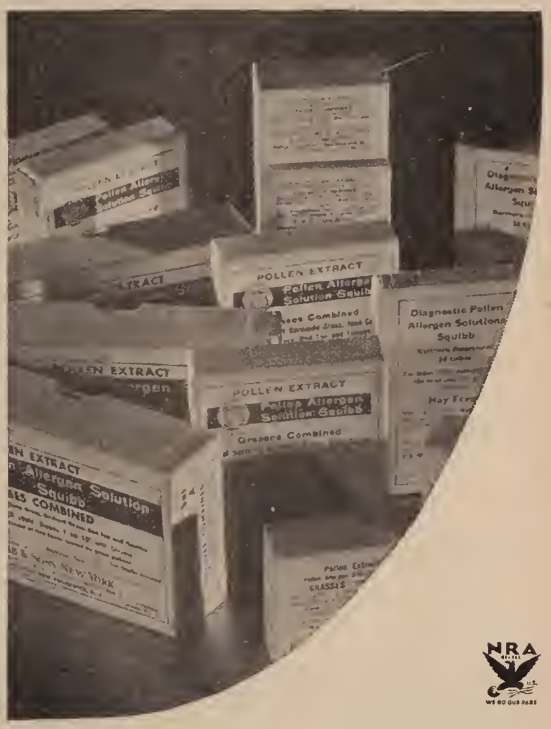
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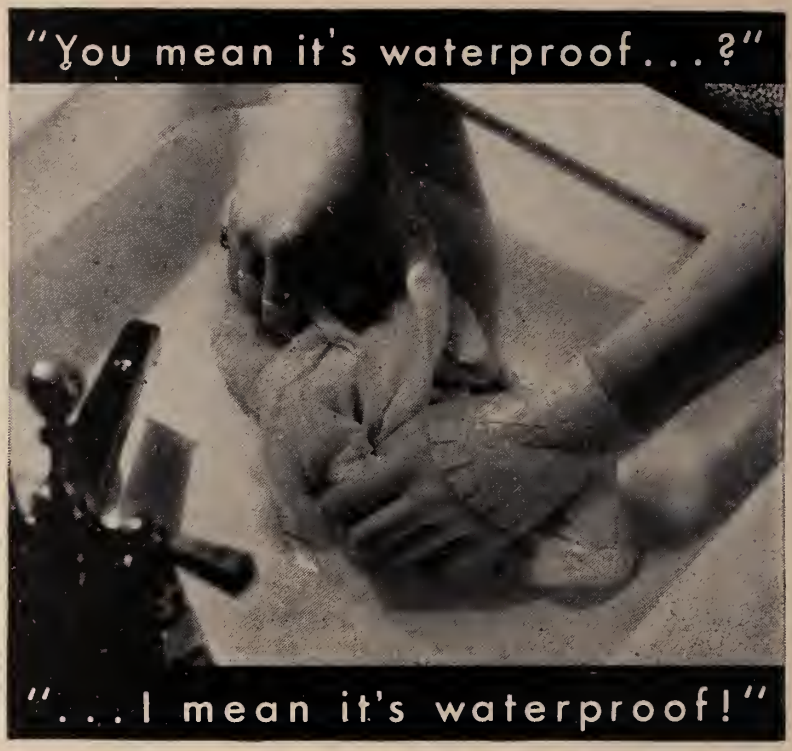
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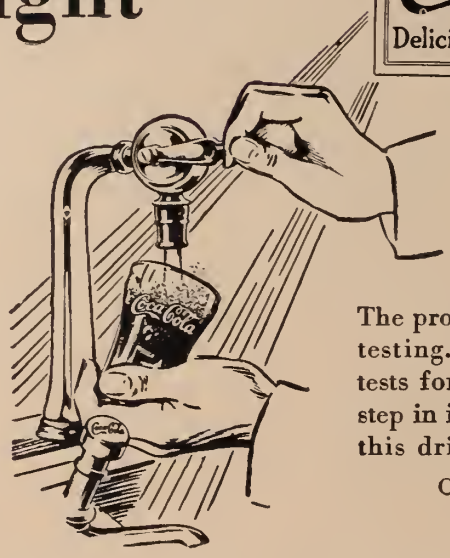
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| Allen | A. O. Miller | Petroleum | June 20 |
| Anderson | J. B. Lyen | Lawrenceburg | June 4 |
| Ballard | F. H. Russell | Wickliffe | June 12 |
| Barren | Paul S. York | Glasgow | June 20 |
| Bath | H. S. Gilmore | Owingsville | June 11 |
| Bell | O. P. Nuckols | Pineville | June 8 |
| Boone | R. E. Ryle | Walton | June 20 |
| Bourbon | W. B. Hopkins | Paris | June 21 |
| Boyd | R. G. Culley | Ashland | June 5 |
| Boyle | P. C. Sanders | Danville | June 12 |
| Bracken | J. M. Stevenson | Brooksville | June 4 |
| Breathitt | O. M. Goodloe | Jackson | June 19 |
| Breckinridge | J. E. Kincheloe | Hardinsburg | June 14 |
| Bullitt | S. H. Ridgeway | Shepherdsville | June — |
| Butler | G. E. Embry | Morgantown | June 6 |
| Caldwell | W. L. Cash | Princeton | June 5 |
| Calloway | A. F. Russell | Murray | June 7 |
| Campbell-Kenton | Luther Bach | Bellevue | June 7-21 |
| Carlisle | G. W. Payne | Bardwell | June 5 |
| Carroll | J. M. Ryan | Carrollton | June — |
| Carter | R. G. Townsend | Grayson | June 12 |
| Casey | Wm. J. Sweeney | Liberty | June 28 |
| Christian | M. A. Gilmore | Hopkinsville | June 19 |
| Clark | R. H. Scobee | Winchester | June 15 |
| Clay | J. L. Anderson | Manchester | June 12 |
| Clinton | S. F. Stephenson | Albany | June 16 |
| Crittendon | C. G. Moreland | Marion | June 11 |
| Cumberland | W. F. Owsley | Burkesville | June 6 |
| Daviess | A. Thorpe | Owensboro | June 12-16 |
| Elliott | | | June — |
| Estill | Walter Cox | Irvine | June 13 |
| Fayette | John Harvey | Lexington | June 12 |
| Fleming | J. B. O'Bannon | Flemingsburg | June 13 |
| Floyd | E. E. Martin | Allen | June 8 |
| Franklin | W. S. Snyder, Jr. | Frankfort | June 7 |
| Fulton | Glynn F. Bushart | Fulton | June 13 |
| Gallatin | J. M. Stallard | Sparta | June 21 |
| Garrard | B. Earl Caywood | Lancaster | June 21 |
| Grant | C. A. Eckler | Dry Ridge | June 20 |
| Graves | H. H. Hunt | Mayfield | June 5 |
| Grayson | R. F. Porter | Middlesboro | June 28 |
| Green | S. J. Simmons | Greensburg | June 4 |
| Greenup | Carl M. Gambill | Greenup | June 8 |
| Hancock | F. M. Griffin | Hawesville | June 4 |
| Hardin | D. E. McClure | Elizabethtown | June 14 |
| Harlan | Clark Bailey | Harlan | June 30 |
| Harrison | W. B. Moore | Cynthiana | June 4 |
| Hart | S. F. Richardson | Munfordville | June 5 |
| Henderson | Walter O'Nan | Henderson | June 11-25 |
| Henry | Owen Carroll | New Castle | June 25 |
| Hickman | Chas. Hunt | Clinton | June 7 |
| Hopkins | David L. Salman | Madisonville | June 7 |
| Jackson | | | June 2 |
| Jefferson | Chas. M. Edelen | Louisville | June 4-18 |
| Jessamine | J. A. VanArsdall | Nicholasville | June 21 |
| Johnson | P. B. Hall | Paintsville | June 9 |
| Knott | M. F. Kelley | Hindman | June 23 |
| Knox | F. R. Burton | Barbourville | June 22 |
| Larue | D. W. Gaddie | Hodgenville | June — |
| Laurel | Oscar D. Brock | London | June 13 |
| Lawrence | L. S. Hayes | Louisa | June 18 |
| Lee | A. L. Hoskins | Beattyville | June 9 |
| Leslie | John H. Kooser, Acting Secretary | Hyden | June — |
| Letcher | R. Dow Collins | Whitesburg | June 26 |
| Lewis | J. D. Liles | Vanceburg | June 18 |
| Lincoln | Lewis J. Jones | Houstonville | June 15 |
| Livingston | Wm. C. Davis | Salem | June — |
| Logan | Walter Byrne, Jr. | Russellville | June 6 |
| Lyon | H. H. Woodson | Eddyville | June 5 |
| McCracken | Leon Higdon | Paducah | June 13-20 |
| McCreary | R. M. Smith | Stearns | June 4 |
| McLean | G. L. Thompson | Calhoun | June 14 |
| Madison | Hugh Mahaffey | Richmond | June 21 |

| COUNTY | SECRETARY | RESIDENCE | DATE 1934 |
|---|---|---|---|
| Marion | W. C. Griffey | Lebanon | June 19 |
| Marshall | S. L. Henson | Benton | June 20 |
| Mason | Allen F. Murphy | Maysville | June 13 |
| Meade | A. A. Baxter | Brandenburg | June 28 |
| Menifee | E. T. Riley | Frenchburg | June — |
| Mercer | J. Tom Price | Harrodsburg | June 12 |
| Metcalfe | P. W. Bushong, Acting Secretary | Edmonton | June 5 |
| Monroe | Geo. E. Bushong | Tompkinsville | June — |
| Montgomery | D. H. Bush | Mt. Sterling | June 12 |
| Morgan | W. H. Wheeler, Acting Secretary | Betsy Sayne | June — |
| Muhlenberg | G. L. Simpson | Greenville | June 12 |
| Nelson | R. H. Greenwell | Bardstown | June 20 |
| Nicholas | F. P. Scott | Carlisle | June 18 |
| Ohio | Oscar Allen | McHenry | June 6 |
| Oldham | S. J. Smock | LeGrange | June 5 |
| Owen | K. S. McBee | Owenton | June 7 |
| Owsley | D. E. Wilder | Booneville | June 4 |
| Pendleton | W. A. McKenney | Falmouth | June 13 |
| Perry | R. L. Collins | Hazard | June 11 |
| Pike | M. D. Flanary | Pikeville | June 4 |
| Powell | I. W. Johnson | Stanton | June 4 |
| Pulaski | M. C. Spradlin | Somerset | June 14 |
| Robertson | | | June 18 |
| Rockcastle | Lee Chestnut | Mount Vernon | June 14 |
| Rowan | G. C. Nickell | Morehead | June 26 |
| Russell | J. B. Scholl | Jabez | June 11 |
| Scott | F. W. Wilt | Georgetown | June 7 |
| Shelby | W. E. Morris | Shelbyville | June 21 |
| Simpson | N. C. Witt | Franklin | June 12 |
| Spencer | | | June — |
| Taylor | W. B. Atkinson | Campbellsville | June 7 |
| Todd | B. E. Boone, Jr. | Elkton | June 6 |
| Trigg | H. L. Wallace | Cadiz | June 27 |
| Trimble | J. J. Gerkins | Bedford | |
| Union | D. C. Donan | Morganfield | June 27 |
| Warren | Hal Neal | Bowling Green | June 13 |
| Washington | J. H. Hopper | Willisburg | June 20 |
| Wayne | R. E. Teague | Monticello | June 7 |
| Webster | C. M. Smith | Dixon | June 29 |
| Whitley | C. A. Moss | Williamsburg | June — |
| Wolfe | G. M. Center | Campton | June 4 |
| Woodford | Chas. F. Voigt | Midway | June 7 |


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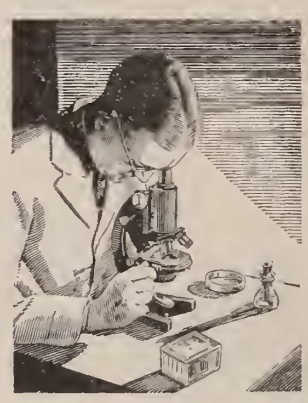



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# KENTUCKY MEDICAL JOURNAL

BEING THE JOURNAL OF THE KENTUCKY STATE MEDICAL ASSOCIATION

**Published Under the Auspices of the Council**

VOL. 32 NO. 6 BOWLING GREEN, KY. JUNE, 1934

## DOCTOR J. L. JONES

Doctor Jones, who has been Director of the Bureau of Epidemiology of the State Board of Health for the past several years, has been elected Assistant State Health Officer of Utah and departed for his new post on May 1st.

Doctor Jones has made a real contribution to the practice of scientific medicine in Kentucky and he will carry back to his native state the gratitude and respect of every one who knew him here.

No larger nor more effective piece of scientific field demonstration in preventive medicine has been made by anyone, any where, than by Doctor Jones in his proof of the effectiveness of the Dick methods for the control of scarlet fever. He has not only demonstrated that scarlet fever may be prevented, but he has clearly proved that the exact technique devised by the Dicks should continue to be used until a simpler plan can be devised by them or other scientists. It is a gigantic task to have skin-tested, made nose and throat cultures, and to have personally immunized more than thirty thousand individuals. It would have been a monumental job had he merely tabulated the more than thirty thousand immunizations which have been done by others in Kentucky. He has a clear record, card indexed and tabulated, of more than sixty thousand immunizations, extending over a period of seven years, during which time no one of those immunized has developed the disease. The exact technique of scarlet fever immunization should be known and practiced by every physician.

As a testimonial in and affection for Doctor and Mrs. Jones, their colleagues in the State Medical Association and the State Board of Health, entertained in their honor at a farewell dinner at the Pendennis Club, on April 24.

We confidently predict great success for Doctor Jones in his new field of service, where he will serve with Doctor T. B. Beatty, State Health Commissioner of Utah, who is the dean of the State Health Officers of the United States.

## THE AMERICAN MEDICAL ASSOCIATION MEETING

The Eighty-Fifth Annual Session of the American Medical Association will be held in Cleveland, June 11-15. All section meetings and exhibits will be housed in the Cleveland Public Auditorium. The Registration Bureau will also be located in the Public Auditorium and will be open for business not later than 8:30 A. M. Monday, June 11. All meetings of the House of Delegates will be held at the Hotel Statler, the first at 10:00 A. M. Monday, June 11.

The General Scientific Meetings will begin at 2 P. M. Monday, June 11, and will extend through the morning and afternoon of Tuesday, June 12 in the Public Auditorium. The program of the General Scientific Meetings will be made up of contributions by outstanding men dealing in a thoroughly practical manner with subjects of important scientific interest. This particular program has heretofore been known as the Clinical Lectures Program. Tuesday afternoon will be given over in the General Scientific Meetings to a Symposium on Amebiasis, which subject will be thoroughly covered in addresses to be delivered by outstanding physicians who are especially well qualified to discuss its various phases. The program on Amebiasis will be as follows:

C. F. Craig, New Orleans, Epidemiology
Henry E. Meleney, Nashville, Pathology
Sidney K. Simon, New Orleans, Clinical Diagnosis
J. B. Magath, Rochester, Minn., Laboratory Diagnosis
G. W. McCoy, Washington, D. C., Prophylaxis
Alfred C. Reed, San Francisco, Treatment
Kenneth M. Lynch, Charleston, Prolonged Influences and Complications of Intestinal Amebiasis

The meetings of the Scientific Sections in the Public Auditorium will begin at 9:00 A. M. Wednesday, June 13, and will extend through the afternoon of Friday, June 15. One session in the Section on Miscellaneous Topics will be devoted to Forensic Medicine

and a second session in that section will be given over to a discussion of Nutrition. All of the programs of the sections are full and section officers have labored zealously to secure programs of very high quality.

The Scientific Exhibit will be fully up to its usual high standards. All available space has been taken and the Exhibits will cover a very wide scope.

The Technical Exhibits will apparently be unusually numerous and varied and individual exhibits will be installed by practically all of the best manufacturers of therapeutic products, devices and publications.

The Local Committee on Arrangements in Cleveland, under the chairmanship of Dr. C. W. Stone, has been active for some months in perfecting arrangements for the Session. A program of delightfful entertainment will be provided. Much of this program will be directed toward the entertainment of ladies who will accompany physicians who register at the Session.

The Woman's Auxiliary will hold its Annual Session and its meetings will be at the Hotel Carter.

A rate of one and one-third of the usual fare has been granted by practically all of the passenger associations in the United States and Canada. Physicians who attend the Cleveland Session should secure from railroad agents when their tickets are purchased a certificate. This certificate, when properly certified by the Secretary of the American Medical Association and validated by an agent of the railroads, will entitle holders to purchase return tickets to their homes for one-third of the regular fare.

Those who expect to go to the Cleveland Session should make hotel reservations at the earliest possible time through Dr. Hubert C. King, Chairman of the Committee on Hotels, 1604 Terminal Tower, Cleveland. On a page in the advertising section of The Journal of the American Medical Association you will find a hotel reservation form.

The Journal of the American Medical Association for May 5 will contain official reports to be submitted to the House of Delegates and The Journal for May 12 will be the Cleveland number in which as complete as possible information concerning all the arrangements for the Annual Session will be presented.

## AN EARLY APPLICATION OF THE WIDAL REACTION IN TYPHOID FEVER

In connection with the Fiftieth Anniversary, shortly to be commemorated by the Experiment Station of the University of Kentucky, Doctor W. B. McClure has been good enough to call to our attention an interesting incident.

Before the American Public Health Association at Buffalo, in September, 1896, Doctor Wyatt Johnston reported his method of obtaining the Widal reaction, using a few drops of dried blood from cases of typhoid fever. During the same month Doctor Daniel J. Healy, who had been a student of Doctor Johnston at McGill began practicing in Lexington. In reading a statement in the Montreal Medical Journal regarding this demonstration, Doctor Healy secured from Doctor Johnston the typhoid culture and instructions regarding the methods. Pure cultures of micro-organisms were difficult to secure at that time. Doctor Johnston had secured his original typhoid culture from Berlin. During the month of October, 1896 Doctor Healy was successfully diagnosing typhoid fever, using the Johnston dried blood method. This was probably the first application of this method in the United States. In 1897 a rather serious outbreak of typhoid fever occurred at the Eastern Kentucky Hospital for the Insane, at Lexington. This gave Doctor Healy a splendid opportunity of demonstrating the value of the Johnston method. The early diagnosis of these cases enabled Doctor E. M. Wiley, then Superintendent of the Institution, to secure and quarantine the cases and the epidemic was soon brought under control.

The profession of the State will be indebted to Doctor McClure for recalling this important historical incident.

## MEASLES CONVALESCENT SERUM

In a recent issue of the Journal, in an editorial on the use of convalescent serum, I read a statement, which I see repeated too frequently in articles on the subject, to the effect that there is no evidence to indicate that convalescent serum used therapeutically in measles has any value. I don't know what the Journal calls evidence, but we know from the experience that we have had in Berea that there is much value in measles serum used therapeutically. Given in sufficient dose after the eruption has appeared, it generally modifies the symptoms and reduces the complications so markedly that we would not think of failing to use it. In extremis, of course, the benefit is slight, but in beginning pneumonia we have seen many cases clear up very rapidly. I am writing this because this statement that convalescent serum is of no therapeutic value should not be repeated; I am sure it is wrong.

R. W. Cowley.

## SCIENTIFIC EDITORIALS

# THE TUBERCULIN TEST ON SCHOOL CHILDREN IN KENTUCKY, ITS SIGNIFICANCE AND APPLICATION

It is generally conceded that the tuberculosis death rate may be depressed to 50 per 100,000 by natural causes, and an adequate hospitalization program whereby the open foci of infection may be removed from the community. To depress the death rate beyond this point requires an intensive, educational campaign and an intensive dispensary program. Field workers have become convinced that very little progress can be made with the reduction of morbidity and mortality from tuberculosis if we wait for the cases to come to clinics and dispensaries for advice. It is necessary to find the hiding and abiding places of tuberculosis among the population.

The most accurate and satisfactory procedure so far devised is the application of the tuberculin test to school children. By this means we are able to find those who are already infected with the tubercle bacillus and seek out the source of such infection by examining the contacts in the home.

In Louisville we have tested over eleven thousand white children and six thousand colored children. Taking the figures to 1933 inclusive, 24.8 per cent white children and 33.5 per cent colored children gave a positive reaction. When we divide this according to graded schools, junior and senior high schools, we find a corresponding rise in the incidence of infection in each age group.

A positive tuberculin test would be, practically speaking, useless if the investigation was carried no further. It becomes necessary in a well rounded program to x-ray every positive reactor, and determine the amount of damage he has sustained from his infection. The figures to 1933 show that 2,039 white children who gave a positive test received an x-ray of the chest. By this means, twelve cases of adult tuberculosis were discovered which is the important part in the program. There were another 1,150 children who showed evidence on the roentgenogram of having received infection with the tubercle bacilli which is being more or less adequately cared for. In another 777 cases the x-ray films of the chest were considered negative. In considering tuberculosis in all its phases, it is necessary to separate white and colored statistics due to the fact that the negro shows a greater incidence of infection and a higher susceptibility to the disease. Of 805 colored children who gave a positive test and were x-rayed, ten showed evidence of the childhood tuberculous infection, and 335 were negative.

The advice given to the parents is based upon the sensitivity of the child to the tuberculin test and the character and the extent of the lesion found in the roentgenogram. Only the adult type of cases are removed from the school and placed on bed rest. The balance of the children are continued in school. The majority of these require supervision only and periodic observation. In certain others it is mandatory that they secure a rest period daily, be placed on a full, nutritious diet, and receive cod liver oil during the winter months. Some, however, in whom the lesion is considered unstable are returned in three to six months for further observation and examination.

We feel that we have sufficient figures for Louisville to give us a true picture of the incidence of tuberculosis in this community. Such a program is eminently worthwhile when we realize that the mortality rate for all causes of tuberculosis has been depressed from 250.8 per 100,000 in 1911, to 79.6 per 100,000 in 1932. The white rate alone for 1933 was 58.5 per 100,000 while the negro rate showed 207.3 per 100,000. The rates for 1934 show a further decline in the mortality for whites with a significant rise in the rate for the colored. Before an adequate program can be planned for the state, it is urgent that we have the basic facts on which to predicate further procedures. The first step is an intensive application of the tuberculin test in the State of Kentucky particularly in the high schools, since it is during adolescence that many latent cases of tuberculosis become reactivated. This is particularly true for young women between 14 to 19 years of age who show 75 per cent higher mortality rate than among boys.

### Technique of the Test

The tuberculin test is simple in its application and is conducted in the same manner as the Schick and Dick test, and with the same precautions as to sterilization of instruments and the preparation of the site for injection. An injection is made between the layers of the skin of one-tenth of a c. c. of previously diluted tuberculin so that one-tenth c. c. represents one-tenth of a milligram. The test is read at the end of forty-eight hours. A positive reaction consists of a zone of redness with induration and not less than eight millimeters in diameter. In the event the test is doubtful or lacks induration or is less than eight millimeters in diameter, a second test is given at the time of reading, consisting of ten times the strength of the previous test, namely: one milligram of tuberculin intracutaneously. This is prepared so that the volume is the same as the previous dose;

namely: one-tenth of a c. c. The second test is again read at the end of forty-eight hours, and the same criterion applied as to a positive reaction. It is exceedingly rare that severe reactions are obtained, and these invariably occur on the first dose and rarely on the second test. They may consist of a zone of redness and induration of fifty millimeters in diameter with vesicle formation. Rarely is there fever and on no occasion have we definitely observed an exacerbation of a tuberculous lesion in the lungs as the result of the test.

In our experience we have found that one-tenth of a milligram as the initial dose is the most satisfactory method, and we have had no occasion to regret this procedure. However, in communities where there is some opposition to the test, or the people have not been sufficiently informed, it may be desirable to use .01 of a milligram as the initial dose, and the second test to consist of .1 of a milligram. For one not experienced in giving the tuberculin test, there would be less likelihood of an unduly severe reaction in the event that more than .1 c. c. was injected on the first test. It is needless to say that the test must be given with a tuberculin syringe graduated in .01 of a c. c. and using a 26 gauge needle, preferably ½". The syringe should be washed out with five per cent phenol, and then with grain alcohol so as to preserve an aseptic technique throughout.

We deem it advisable that children who are allergic and show evidence of hay fever or asthma be excused from the test in order to avoid the possibility of an unpleasant reaction due to sensitization of the child to the bouillon from which the tuberculiin is prepared. Such children receive an x-ray without having the test.

All these children giving a positive test receive an x-ray examination of the chest which is later interpreted and the advice sent to the parents with instructions to hand same to their family physician. It cannot be sufficiently stressed that the x-ray examination of the chest must go hand in hand with the tuberculin test, and the findings must be interpreted conservatively by one experienced in childhood tuberculous infection since many of these children handle their tuberculous infection well, and rarely show evidence of manifest disease. A program of this character must be carried out so as to avoid undue alarm in the community. It must be preceded by an intelligent discussion of the test and its interpretation before the Parent-Teacher groups in order to secure their support and co-operation.

A proposed program would be as follows:

First: The local medical profession to sponsor the test.

Second: An address before the Parent-Teacher Organization by some of the local profession and a representative from the State Board of Health.

Third: The application of the test on the first morning of the week to all children whose parents have signed slips requesting same, such test to be given either by the local profession or local health officer or representative of the State Board of Health.

Fourth: The test to be read on Wednesday, the positive recorded and the negatives retested. The test again read on Friday and the positives recorded. At the second reading which occurs on Friday, a portable x-ray manned by the State Board of Health should be set up and the positive cases x-rayed. Most of the children can be taken on 10 inch x 12 inch and 11 inch x 14 inch films.

Fifth ...e films to be sent to the state sanatorium for developing and interpretation. Type written reports of the interpretation should be made and filed for future reference, and a copy of the recommendations forwarded to the parent with instruc...ions to report to the family physician.

Sixth: The basic facts should be included on the health card of the child and filed in the school with his scholastic record.

Seventh: Where local facilities exist for x-raying school children an endeavor to consummate plans for this purpose should be made. Lay organizations such as the National Congress of Parents and Teachers are urging their respective units to push the tuberculin testing of all high school children in view of the fact that tuberculosis is the leading cause of death in the college and high school age groups. Leadership in all health programs should be rightfully centered in the medical profession, and we are making this appeal to the profession of Kentucky that they assume the leadership in this important movement.

Oscar O. Miller, M. D.
B. L. Brock, M. D.
Paul E. Turner, M. D.
L. E. Smith, M. D.

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## SURGICAL KELOID

Keloids have ever remained a mystery. The factor or factors, which enter into its occurrence is not uncommon, but no reason has been, or is, advanced to a logical conclusion, explaining its cause. There are, however, certain characteristics present in a keloidal manifestation that should be recognized, considered, accepted and acted upon promptly to prevent its extension and subsequent symptoms.

Keloids may be the result of a dissolution

of the continuity of the skin within its corium layer, whether it be by knife, burns, acids and, in any event, producing a penetration beyond the second layer of the skin.

### Formation of Keloid

There is no logical explanation for the appearance of keloid formation. Simply, it would seem to be an over-production of scar tissue. However, in keloid, the scar tissue fibres assume such abnormal sizes and appearances, growing without rhyme or reason, and certainly over correcting normal repair, that these growths should properly be put in the classification of new growths, or tumor formation.

Normally, there is a production of young fibro-connective tissue, which weaves a binding network across the space caused by the trauma, in order to fill the gap between the edges of the corium. Once this space is filled to the level of the germinating layer of the skin, the process ceases; and as the fibro-connective tissue cells become older, they become dense, hard and contract, welding the edges of the incision together. Simultaneously, the skin cells have been reforming from the germinal layer, until epithelization is complete.

In the formation of keloids, the fast growing scar tissue cells fail to receive or recognize the signal to stop when normal repair has been completed. So they continue their hyperplasia and begin to hypertrophy, that is, continue multiplying in number and also increase in size. Finally, the mass of growing cells literally exude from the incision or site of injury and protrude outwards, even though, the surface is covered with epithelium. The growth is relatively rapid; and, at times, large and even bizarre and disfiguring tumors are formed. These formations have been known to grow so large that the relatively small pedicles cannot supply necessary nutrition, therefore, ulceration ensues.

Since the fibro-connective tissue cells come from the fibrin of blood, it is certainly well to avoid all possible "dead spaces" that might hold minute collections of plasma, and strive to attain healing by first intention. But, it is a well-known fact, that wounds that are poorly cared for will very frequently give good scar formation without keloids. Hence, the appearance of keloid is no index of the care, skill or judgment exercised by the operator

A keloid formation may persist for an undeterminable number of years; and then cease to manifest itself with further injury to skin; likewise, normal scars may be present and subsequent injury result in keloidal scar formation.

It is, usually, useless to surgically remove a keloidal scar as a new one will reform, necessarily larger; but we often find it advisable to surgically remove a keloidal scar, immediately treat the line of incision with radium, having sewed the incision with a subcuticular stitch to prevent a recurrence of the growth and, thereby, produce a thin linear scar. The subcuticular stitch is used to avoid injury to the derma, going through the outer part of the skin and occasion the usual occurrence of small keloids at entrance of each stitch with through-and-through sutures. This is well to bear in mind, but often forgotten, possibly, because of incorrect diagnosis of the primary lesion. I advise treating the resolvent keloidal scars or growths, immediately upon removal of the large scars with radium; because I find it is the best method of obtaining cosmetic result. X-ray may be also used, but is inferior to radium and, as a nicety, I prefer radium. Keeping in mind these above possibilities, an early recognition of keloid formation should never be a source of embarrassment to a surgeon as he has no protection against its occurrence; but for some reason, probably, the same as when you inject 606 with a resulting salvarsan dermatitis, the surgeon is sometimes prone to dilly-dally and dodge the issue until much valuable time is lost; and then the patient has some basis for complaint; as the best time to treat a keloid is at the earliest opportunity. The effect of not treating and relieving keloids is a steadily growing keloid for an undeterminable period; then a contraction of scar tissue, itching, burning and nerve pinches of large extensions add greater difficulty of resolving the indurated resulting scar-like mass. Radium or x-ray treatment require care and judgment on the part of the radiologist, whereas, a too large dose of radium or x-ray will cause a resolvement of the raised, enlarged keloidal formation; there may later develop a telangiectasia or appearance of small, tiny blood capillaries follow a too rapid resolvement in its correction.

It is quite disheartening, following an operation for thyroid, after seeing a beautiful thin scar, develop, become wider, raised and very noticeable. How much better it is to foresee such a possibility and advise patients of its possible occurrence in occasional cases so the surgeon may be consulted and the patients be advised to quickly treat before its advance becomes of any moment. Such a routine would remove an embarrassed situation and lead to a better understanding between patient and surgeon. Should keloid enlarge to any extent and require surgical removal as well as radium treatment, the responsibility lies upon the patient; and, certainly, relieves one from explaining our lack of knowledge of cause of keloids and a

lack of protection against its occurrence to many patients with a supposed grievance after its appearance. One may ask, "Why all this trouble about surgical keloids?" And my answer is, "Lots of patients consult me, after keloids have formed, who might have been advised by their physicans at an earlier date;" and I offer the above suggestions to enable patients to offer lesions at early date and obtain smaller scars; and prevent misconceptions of its occurrence. I believe, it is of sufficient importance to occasionally call attention to the incidence of keloidal formation and attention to its appearance and enable the surgeons to meet a needless situation; and stress the importance of early treatment and, thereby, stop cessation of extension of scar formation.

Some years ago, I wrote an article advocating the appropriateness of changing the term, keloid, to corioma ( a claw). From the lack of response and comment, I concluded no matter how little we know or conclude, keloids are keloids. But its existence must be borne in mind and the incidence met promptly. W. J. Young.

## NEW AND UNOFFICIAL REMEDIES

New and Nonofficial Remedies, 1934, has the same pleasing format and helpful mechanism that has characterized it in the past years.

The Council has made the usual careful revision of the book. The general article Lactic Acid-Producing Organisms and Preparations has been practically rewritten. The chapter on Arsenic preparations has undergone some revision, especially in the statement concerning Neoarsphenamine. The descriptions of Chiniofon and Vioform have been revised in the light of recent developments in the treatment of amebiasis. The article on Ethylhydrocupreine has been revised to delete references to Optochin Base, which has been omitted; Optochin Hydrochloride has been retained, being recommended only for external use. The description of Typhoid Vaccine has been revised to give the dosage of the combination of typhoid and paratyphoid organisms and to mention the use of typhoid vaccine in nonspecific protein therapy.

Among the preparations newly included in this volume are the new alum precipitated diphtheria toxoid; Neo-Iopax, a new medium for intravenous urography; Benzedrine, an ephedrine substitute; serum containing type II pneumococcus antibodies, which the Council has recently recognized as worthy of clinical trial in view of improved preparations and technic; Autolyzed Liver Concentrate and Extralin, two new liver preparations for use in the treatment of pernicious anemia; Metycaine, a new local anesthetic; and Sodium Morrhuate, a salt of the fatty acids of cod liver oil.

## ORIGINAL ARTICLES

## BULBAR FORM OF POLIOMYELITIS, REPORT OF CASE*

James W. Bruce, M. D.
Louisville.

Patient, male, white age 6. Previous history unimportant except that he had suffered from a mild intestinal fermentation some months previously.

On July 19th, 1932, he developed a little fever and sore throat, for which he was treated by the family physician. The next day he had a mild diarrhea and was again treated.

On July 23rd the mother noticed that the child could not swallow; that food or liquid regurgitated through the nose and mouth and caused him to choke. I saw him on July 24th at which time he had been sick five days. On physical examination I found absolutely no evidence of paralysis anywhere, except that the child could not swallow. I had Dr. Claude T. Wolfe see him and he agreed with me that there was no physical evidence of obstruction. The next day I did a spinal puncture. The fluid was perfectly clear and under no increased pressure. Examination showed 120 cells per cu. mm.; total proteins 75 mgs.; quantitative sugar 85 mgs. Differential blood count showed, lymphocytes 75%; monos, 18 per cent; polys, 7 per cent. I made diagnosis of bulbar form of anterior poliomyelitis, and the next morning it was very evident because he had developed a right facial paralysis involving both sterno-mastoids and both deltoids.

The child was taken to the City Hospital and put on a bed with the feet elevated. The thing that bothered him most was that saliva would accumulate in the pharynx and get into the larynx and cause him to choke. He was absolutely unable to swallow anything and had to be tube fed. After several days his breathing became shallow and it looked as if the intercostals were wearing out. However, I thought it was rather a weakness of the intercostal muscles than a wearing-out of the respiratory center. At this time Dr. Spurling saw him with me and recommended transferring him to Christ Hospital at Cincinnati which is equipped with a respirator. He was accordingly taken there and placed under the respirator where he remained for a week, after which he was able to get along on his own motor power. Two weeks later it was deemed safe to bring him back here and since that time Dr. Owen has had charge of the orthopedic side of the case.

This boy was totally unable to swallow

*Read before the Medico-Chirurgical Society, Louisville.

from the time of the onset of his paralysis on July 23rd, 1932, until April 1st, 1933, a period of about 8½ months. During this time he was fed entirely by nasal catheter. His mother learned to place it and he was fed, about four times daily, a mixture of buttermilk, egg, cod-liver oil and vegetable puree. He gained weight and remained pretty well nourished.

In February, 1933, Dr. Curt Krieger examined him with an oesophagoscope and said that the constrictor muscles, low down on the right side where they could not be seen without the aid of the oesophagoscope, were paralyzed. Dr. Spurling saw him again about that time with a view to anastomosing the glossopharyngeal nerve with some other nerve and thus possibly bringing back the function of the muscles, but decided that sufficient time had not elapsed to warrant operative interference.

About the first of April, 1933, the mother noticed that the child was able to swallow, and from that time on he has been getting better until now he swallows perfectly well. He eats anything and in that respect is all right. He still has extensive paralysis of the deltoid and other muscles.

This is the first case of bulbar paralysis involving the function of swallowing that I have ever seen. It is usually associated with respiratory paralysis and the only thing that saved this boy's life was the respirator.

## DISCUSSION

**R. Glen Spurling:** At the time I saw this patient, sufficient time had not elapsed to consider any surgical attempt to restore the function of the paralyzed nerves. It was a very interesting neurological situation that presented itself. The entire group of muscles supplied by the glossopharyngeal nerve on the right side were paralyzed. He also had on the same side spinal accessory paralysis and on the opposite side hypoglossal paralysis. The only motor nerves that could possibly be used, without serious after effects after anastomosis, were the hypoglossal and the spinal accessory. The peculiar distribution of the paralysis absolutely precluded any attempt at anastomosing either of these nerves with the glossopharyngeal.

When I first saw this patient during the acute stage of the disease, he was in a very serious condition because of the extensive paralysis of the accessory respiratory muscles. There was also paralysis in one side of the diaphragm. We felt at this time that unless a respirator was made available he would certainly die of respiratory paralysis.

This was the first case of bulbar poliomyelitis that I had seen with this particular group of nerves paralyzed. Some time later, however, I had a similar experience with a patient upon whom I had operated three years ago for removal of a cerebellar tumor. He had recovered completely from the effects of the tumor. One morning, on awakening, when he attempted to get out of bed, he fell to the floor because of weakness of his legs. He was transferred here immediately in an ambulance, and when he arrived, he had the typical findings of poliomyelitis, the paralysis starting in the feet and legs and rapidly ascending until he was completely paralyzed from the neck downward. Finally, the bulbar centers were involved. He became dyspneic and had typical paralysis of the glossopharyngeal nerve. He was unable to swallow either solid or liquid foods. He was rushed to the respirator in Cincinnati and was discharged from there three weeks later free of respiratory difficulties.

It should be pointed out that the restoration of function of paralyzed muscles following poliomyelitis may be greatly delayed. Certainly, no operative intervention should be resorted to until at least a year from the acute stage of the disease has elapsed.

**L. R. Hubbard,** Warm Springs, Ga.: I saw this patient today and examined his muscles. It is a very interesting case. I have seen two or three instances of paralysis of the muscles of deglutition, but they were not accompanied by the same conditions that this child had and generally cleared up within two or three weeks. The boy swallows quite easily now and it seems to me there is very little danger of a recurrence of that particular trouble. His abdominal muscles are almost normal, his back muscles are quite strong and his legs normal. The most serious feature of the case is the paralysis of the shoulder group and the muscles of the upper chest. He still has weak expansion and considerable weakness of the intercostals and accessory respiratory muscles, but I think they will gain under proper treatment, exercises, etc. His neck muscles have come back quite well. He has some one-sided weakness of the sternoclido and carries his head a little to one side, but with the brace Dr. Owen has applied and proper attention to building up his general condition I think this will improve considerably.

The question of the deltoids is one no one can answer. Fortunately the hand, forearm and biceps are pretty good and even if the deltoid and shoulder group do not come back, he will have pretty useful hands and arms.

**W. Barnett Owen:** Dr. Bruce asked me to see this patient very early in the history of the case. Most of these cases of bulbar paralysis die in a very short time. This case was an exception. Fortunately this condition expends its greatest force at the outset; these patients never get any worse, they always improve. This child still has some involvement of the quadriceps extensor of the left leg. The right leg is normal and the right forearm practically normal. He carries the left arm in supernation and the right

arm in pronation. He was unable to hold up his head and as soon as he was able to sit up a brace was applied, extending from the hips to the occiput, which supports the head in the median line without effort on his part.

One danger in these cases of poliomyelitis is that of over-treatment. The parents are over-anxious and sometimes too much is attempted. We have heard a great deal about the use of serum in the treatment of polio, but I am quite sceptical as to its benefit. However, it is practically the only known method for early treatment of these cases and as we know of nothing else to do we advise its use. Personally, I believe repeated spinal punctures and complete rest are of more value than anything that can be done, they should be kept warm at all times. Deformities should be prevented by mechanical means. After the acute stage has passed, perhaps eight weeks after the initial onset, mild massage should be instituted. When the child is permitted to sit up it should be supported with the limbs and spine in normal position without undue effort. Over-exercise is more detrimental than no exercise at all.

This child has improved markedly in the past three weeks and I feel that now is the psychological time to institute more vigorous physiotherapy. The parents have been advised to take him to Warm Sprinps, Ga., where with under water graduated exercise and rest, away from the family, I think he will be greatly benefitted.

**Louis Frank:** I agree with Dr. Spurling that attempts at nerve anastomosis in this case should not be made until after the disease has run its course and sufficient time has elapsed to allow for a possible return of function to the affected muscles.

The fact that it was necessary to send this child to Cincinnati to be placed in a respirator emphasizes the lack of availability of such equipment in this city. I believe it would not be amiss for this Society to take steps which would result in having the City of Louisville procure a respirator and make it a part of the equipment of the City Hospital.

**A. J. Miller:** One interesting phase of this subject is the relationship between proper treatment and the pathology of anterior poliomyelitis. In this disease there are practically always some nerve cells killed and, of course, they are gone forever. The central nervous system, or perhaps I should say the nerve cells are not like other cells of the body where regenerated cells take the place of those killed, and oftentimes take up the function of the destroyed cells. That does not happen in the case of these nerve cells, but what does happen is that many nerve cells in the region of an area in which the nerve cells are killed, are damaged or injured to such an extent that they cannot function during the course of convalescence, but afterwards repair takes place and their function may be restored. This also happens—that the tracts which pass by the foci of infection, in the cord for instance, may be so badly damaged that the tracts cannot function, or they may be destroyed, and the nerve cells of bodies belonging to this tract might be damaged but could be regenerated. We speak of such a healing process as regeneration of the central nervous system. Some of the function of the cells that have been destroyed might be taken by other nearby cells, or impulses sent over peripheral nerves by a roundabout path. Because of this reparative process it is extremely important that sufficient time be allowed after the disease has run its course for all the repair that is possible. A very common error is to attempt to do something too soon. I would say to wait at least a year, as suggested by Dr. Spurling, and if there is then any doubt, to wait still longer.

**J. W. Bruce,** (in closing): Opinion is divided as to the advisability of serum treatment in this condition. During the New York epidemic in 1931, Park observed more than 900 cases of polio, in half of which serum was given and in the other half it was not, and his conclusion was that the serum did absolutely no good; that there was just as much paralysis, that it lasted just as long and there were just as many deaths in one as in the other. Kramer, of Brooklyn, during the same epidemic, observed more than 400 cases, half of which received the serum and the other half did not, and he came to the same conclusion, that the serum treatment offered no advantage in these cases. On the other hand, in San Francisco, during the summer of 1930, Shaw and those who worked with him, came to the conclusion that the serum treatment was of some benefit.

So, we have the greatest difference of opinion, not only as to the results of serum but as to how it should be administered. Some say it should be given intraspinally, others that if you so much as tap the cord you injure it and make it easier for the disease to extend. Some think it should be given intravenously or intramuscularly.

One peculiar feature of the case reported was that the first evidence of paralysis was in the muscles of deglutition and yet physical examination revealed no paralysis that could be demonstrated. Whether administration of serum at this time would have helped, I do not know. I do not believe the last word has been said on the subject of serum.

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**Choice of Donor for Transfusion.**—In the choice of suitable donors for transfusion, Thomsen proposes to institute a preliminary test primarily based on the direct determination of whether the transferred blood will be hemolyzed or not, which is, he says, the most important determination for the course of the transfusion. The question whether so-called universal donors (type O) are more or less suited will also be answered by the outcome of the test.

# LEPROSY IN KENTUCKY*

L. H. South, M. D.
Louisville.

It is generally agreed that there are 5,000,000 persons in the world who have leprosy. There are at least 2,000 cases in the United States, of which about 400 of this number are isolated at the National Leprosarium at Carville, and about 1600 infected people in this country are "going to and fro in the earth and walking up and down in it."

Leprosy is endemic among our native born along our three Gulf States, Louisiana, Texas and Florida, but no cases were ever reported in a native born Kentuckian until 1915. Since



that time two cases in the last three years have occurred in Louisville, one of these, as far as I could ascertain from his history, having never been in contact with a case of leprosy, nor had frequented the Gulf States. Both were born and reared in Louisville and had the normal life of the well-to-do, wealthy Louisvillian in regards to daily habits and travel. The third case diagnosed several years before the last two cases was born in Russia but came to Louisville to live at the age of four years. It is probable that this family imported the infection from Russia, and was the source of the other two cases. Exactly how the contagion spread I do not know.

There is a mystery in the link in the epidemiology of this disease that science has not yet solved, which was well shown in these cases; each of these three people were so widely separated in their social, religious and business circles that the possibility of personal contact was very remote.

The first case, Mrs. G., in her youth went to a boarding school in New Orleans. If she contracted the disease then it remained dormant for a long time, for the first symptoms only appeared in middle age, forty years later. She developed kermatosis of the hands and feet and forehead, and in later stages the anesthetic areas appeared. The



Bacillus leprae was found in the nose and nodules, the diagnosis being confirmed by Dr. Hyde, of Chicago, and later by the Carville Leprosarium, where she died in 1915. This case was first recognized by Dr. M. L. Ravitch.

The second case, aged 58, was a white, male, Jew, of German origin. He spent all his life in Louisville. His family of three brothers and three sisters are living and well, while his father and mother died at an advanced age, not of leprosy. In 1918, two years previous to his admittance to Carville, he noticed nodules on his leg, which later spread over his whole body. Diagnosis was made in the laboratories of the State Board of Health and confirmed at the National Leprosarium. This patient has left the institution, and is now in New York City, where compulsory isolation is not required.

The third case was diagnosed in 1932, at the age of 40. He was born in Russia, and came to America when four years old. No immediate member of his family was similarly infected, although an uncle by marriage in Russia, had leprosy. His sister and brother are in good health, and his mother is still living at the age of 80. His first symptom was a sore in the right thigh which appeared in 1920. He developed scattered sores all over his body, which would ulcerate and heal. In 1916 he contracted syphilis and was treated

*Read before the Kentucky State Medical Association at Murray, September 11, 12, 13, 14, 1933.

at the City Hospital.

In 1930 he was examined by the Bureau of Bacteriology but no leprae bacilli were found in the nose or other lesions.

In 1932 numerous nodules appeared on the face and Bacillus leprae was readily found in these nodules and in the nasal secretions. The patient died in 1933 at the leprosarium at Carsville.

These three cases, which have occurred in Louisville, tell in no uncertain terms that there is here a focus of infection. The case in diagnosis which has followed the discovery of the etiological agent, obligates the profession to suspect leprosy in any obscure skin condition until a laboratory procedure has ruled it out. This is the more important since the development of a remedy, offering the hope of a cure in early stages.

**DISCUSSION**

**Winston U. Rutledge,** Louisville: I enjoyed Dr. South's paper very much, and I think she also brings to us a new idea of the condition that we usually think of as being an oriental or foreign disease and a condition that we rarely see in this country, particularly in Louisville.

I was very much surprised when I was in New York to realize that there were about 100 cases of leprosy going around New York all the time. Most of them were occupied as telephone operators and elevator boys, and as long as they reported at some medical center once a week for observation and treatment, the City of New York did not isolate them.

From Dr. South's description of the diagnosis from the bacterial studies of these cases it seems very easy, but a year before Dr. South diagnosed this last patient I saw him at the City Hospital and at that time I excised one of the fresh nodules and did microscopic sections of it and stains for the bacilli and did not find them at that time. It does appear that sometimes these nodules may not have the bacilli present in sufficient quantity to demonstrate them.

I enjoyed the paper very much.

**Smithfield Keffer,** Grayson: I want to ask Dr. South a question. When I was in New York in 1913 I had occasion to go to the Skin and Cancer Hospital a number of times, and the doorkeeper there was a leper. I asked one of the doctors about that. I said, "Is it contagious?" And he said that in the latitude of New York they didn't think it was. I want to ask Dr. South what they do about that now. That was some nineteen years ago.

**Leon L. Solomon,** Louisville: I have just asked Dr. South the name of the gentleman, referred to in her paper as "born in Russia, and coming to this country when he was four years of age." Sometime during 1904, 5 or 6, I cannot be accurate as to the exact date, a man, bearing identical name, was under my observation. Though born in Russia, this patient did not come to the United States until he was much older. Several of his children still reside in Louisville. The diagnosis of leprosy was made by me in his case, concurred in by the late Dr. I. N. Bloom. The man died about ten years ago. He was then about 65 years of age. Dr. John V. Shoemaker, of Philadelphia, noted Dermatologist of his day, an authority on Materia Medica and Therapeutics, saw the patient, at my request, reporting to me that he did not consider the case leprosy. Among the children and grandchildren, no case of leprosy has since developed.

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## ADYNAMIC ILEUS IN ABDOMINAL SURGERY*

E. W. Jackson, M. D.
Paducah.

Adynamic Ileus is an intestinal obstruction which is not due to a mechanical interference with the passage of the fecal current. But is the result of an imbalance of the nervous mechanism which controls the physiologic activity of the gastro-intestinal tract, or is due to changes within the intestinal wall, which produce a functional impairment.

There is much evidence to support the belief that in many cases there is also a causal relationship between the higher nerve centers and the local nervous reaction which is responsible for the development of this process. Clinical observation shows that it more often occurs in the highly nervous and apprehensive patient.

The terms adynamic and paralytic ileus have to a large extent been used synonymously, in fact paralytic ileus has been the more common and familiar of the two. This is being objected to by many because of the fact, as shown by Alvarez and others, that in adynamic ileus the intestinal musculature is not paralyzed until the process has reached the end stage, where distention has produced a pressure strangulation and the circulation within the intestinal wall has been damaged. The basic condition in the usual run of cases is one of inhibition of function, due to hyperstimulation of the splanchic sympathetic nerves rather than to a paralysis.

With these facts in mind, it has been argued that in the term adynamic ileus should be used to express the pathologic entity, and paralytic ileus, if employed at all, should be used only in connection with the terminal stage.

Adynamic ileus is too often regarded as a rare and somewhat hopeless pathological process, while as a matter of fact, it is, when

*Read at quarterly meeting Southwestern Kentucky Medical Society, at Benton, February 6, 1934.

viewed in the light of present knowledge, a very common complication. And when recognized sufficiently early, is an amenable to treatment as many other potentially dangerous processes which purely on account of being better understood, are approached with but little fear.

It is the process which strikes the fatal blow to the vast majority of patients who die from inflammatory or obstructive lesions within the abdominal cavity. And if the death rate in abdominal surgery is to be reduced, it must in a very great measure, be attained through a better understanding and more appropriate treatment of this complicating condition.

### Causes

There are many and varied causes of adynamic ileus. It very often occurs as a result of pathology entirely outside of the abdominal cavity. But only those cases occurring in connection with abdominal surgery, and especially those which are due to trauma and exposure of the intestine to the air during the course of a laparotomy and those which result from peritonitic and obstructive lesions will be considered. There is another cause which must be regarded as an important element in the production of ileus, namely, swallowed air, but it is very doubtful if this alone would be sufficient to cause adynamic ileus. A physiologically normal gastro-intestinal tract should effect its elimination. But where impairment of function already exists, the swallowed air acts as an added and aggravating factor.

Trauma and exposure to air during abdominal operations is probably the most frequent cause. It occurs in some degree after every abdominal operation, but the mild cases usually subside in from six to twenty-four hours. It may be so mild as to escape clinical detection, but nevertheless it is present as a potential danger, and furnishes a contradictory answer to the frequently expressed opinion that abdominal incision and drainage alone can do no harm. This is referred to as physiologic ileus where nature is putting the intestine at rest in an effort to enable it to recover from the damage which it has sustained. This physiologic ileus must be considered in the post operative care of every abdominal operation and also when the advisability of operation is being considered where ileus is present or is likely to become a serious factor.

Ileus in some degree, almost invariably accompanies peritonitis. This may also be termed a physiologic ileus, in that it is an effort of nature to permit localization of the infection. However, the development of this protective process is frequently carried too far and more harm is caused by the ileus than the infection which it is designed to overcome. A proper balance between the two is desirable, but not always obtained. The ileus instead of subsiding with the infection often persists, and is the cause of death in the vast majority of cases of fatal peritonitis. Death may occur early in the attack as a result of an overwhelming infection, however, this first on-slaught is survived in the majority of cases, but the patient is frequently left with adynamic ileus.

This ileus is superimposed upon all neglected cases of mechanical obstruction and now appears to be the chief factor in the cause of death. Efforts to identify a specific toxin in mechanical obstruction have failed and there is no conclusive proof to show that there is such a toxin. But, it has been shown that the disturbances attending adynamic ileus can account for the symptoms which in the past have been attributed to this supposedly specific toxin.

### Pathology and Pathologic Physiology

In as much as adynamic ileus is largely a matter of disturbed physiologic function, a review of a few facts in this connection may serve to aid us in arriving at a better understanding of the disease and a better appreciation of the therapeutic problems confronting us in the treatment.

First: The intestinal tract is not only concerned with digestion and absorption and the propulsion and elimination of fecal material, but its mucous membrane is the most important factor in maintaining the normal gas and fluid balance between the blood stream and the intestinal canal.

Second: Both the circular and longitudinal muscular fibers of the intestine are capable of contracting and relaxing. The gut is, therefore, not only distended in circumference by an increase of intra-intestinal pressure, but is also increased in length while its mesentery fails to accomodate itself to the change. This disproportion in length predisposes to angulation and kinking of the intestine by distention.

Third: Dilatation and inertia of the musculature is not merely a passive effect of deficient contractive impulses, but is the direct result of stimulation of the splanchic sympathetic nerves which actually inhibit contraction.

Fourth: There are normally large quantities of fluids, estimated by Rowntree, to be from seventy-five hundred to ten thousand cc poured into the upper part of the intestine every twenty-four hours. These fluids consist of secretions from the salivary, gastric, hepatic, pancreatic and intestinal glands which are reabsorbed in the lower part of the intestine. They contain minerals which play

a very material and necessary part in maintaining the normal acid base balance. Impairment of the absorptive capacity of the intestinal mucosa will result in a fluid accumulation in the intestine as well as a change in the volume and chemical quality of the blood.

Fifth: In order that water may be held by the tissues in the normal physiologic ratio, it is necessary to have sufficient minerals, principally the chlorides. If these chemicals are lost by vomiting or failure of absorption, the water filters through the tissues and dehydration takes place.

Sixth: The body is composed of approximately seventy per cent water and as stated by Orr, a loss of ten per cent of this volume will produce symptoms and a loss of twenty to twenty-two per cent will cause death.

Seventh: The blood concentration in health remains practically constant, but if plasma is lost in excess of its replenishment, a hemoconcentration with increased viscosity results. This impairs the blood as a circulating medium in direct proportion to the degree of concentration, and according to Underhill, a concentration to 140 per cent of the normal will cause death in a short time.

These are important points which have a practical bearing upon the subject and if kept in mind, will be of much benefit in the management of adynamic ileus.

Stimulation of the splanchnic nerves induces a loss of tone in the intestinal wall and arrest of peristalsis with a reduction or loss of propulsive force. At the same time, there is an increased tone of the ileo-cecal sphincter. This splanchnic stimulation, therefore, causes a two-fold effect in producing an obstruction in that it lessens the force from above and increases the resistance below. With the loss of intestinal tone, there is impairment of the circulation within the wall on the venous side which results in a local anoxemia with an increase in the capillary permeability, the function of the mucosa is impaired and the normal gas and fluid balance between the blood stream and the intestinal canal is lost. The peristalic disturbance is irregular in onset with some segments contracting and others blocking their propulsive force. In this manner the gas pain is produced. This gas pain is the initial expression of a mild or beginning ileus and should be considered as a signal for close observation and such care and treatment as the particular case may demand.

Intestinal distention from gases and fluids further impairs the function of the mucosa in that it increases its capacity for eliminating these substances from the blood stream into the intestinal canal, and at the same time decreases its capacity for absorbing them, consequently, a vicious circle is established. It has been shown that only a very small part of the gas in the small intestine arises from fermentation. A great deal of it is eliminated from the blood stream into the intestinal canal, and McIver and others have shown that much of it is due to swallowed air. Only a small part of this gas, approximately one-tenth, as shown by the experiments of Zuntz and Tacke is passed through the anal canal, while by far the larger amount is absorbed into the blood stream through the portal circulation, carried through the liver and eliminated by the lungs. The swallowed air has a high nitrogen content which is not readily absorbed and is largely dependent upon peristaltic activity for its elimination. Its presence in ileus is therefore, a potential source of trouble.

The higher the intra-intestinal pressure is raised, the more the gas and fluid balance is disturbed with a consequent greater rise in pressure. The force of this pressure is exerted against the intestinal wall and interferes with its circulation.

If the process is permitted to continue, nature, in an effort to bring about in its own relief, will produce a reverse peristalsis which causes a regurgitation of the intestinal contents into the stomach from which it is vomited. Vomiting of large amounts of fluids and their contained chlorides, in addition to those which are not reabsorbed and remain in the intestinal canal, results in a hypochloremia and dehydration.

Alkalosis is the general rule in ileus on account of the loss of chlorides, but the fixed bases are also lost, and it is possible to have an acidosis in spite of the chloride loss, but this is not often encountered in ileus.

On account of the dehydration and excessive protein destruction, there is an increase in the blood N. P. N. and urea nitrogen, which is corrected by the restoration of the water and chemical balance.

In cases of well developed ileus a loss of the vasoconstrictor influence upon the splanchnic vessels takes place and the blood is pooled in this area. On account of the plasma loss the concentration and viscosity of the blood is increased, the flow through the capillaries is lessened and the heart fails to receive a sufficient volume of blood to keep up the normal circulation, and an insufficient amount of oxygen reaches the tissues. At the same the high intra-intestinal pressure and the damaged intestinal wall permits the absorption of intestinal toxins. In short the end stage of adynamic ileus is represented by dehydration and toxemia, and a failing circulation with lack of oxygenation.

### Symptoms and Signs

In adynamic ileus the peristaltic sounds as detected by the stethoscope are decreased in intensity and continue to grow less as the process advances. After it has become well developed, a metallic tinkle is usually audible. This is the result of accumulation of both gases and fluids which are shifted about in the intestine producing this peculiar, but characteristic and warning sound. As the process advances, peristalsis gradually disappears and leaves the patient with a silent abdomen. Abdominal distention is variable in the beginning, depending upon the amount of the intestinal pressure and the rigidity of the abdominal muscles, but generally it will not have progressed very far before there is distention in the epigastric region, and frequently the entire abdomen is distended early in the attack, finally, general distention practically always occurs. The gas pain is an early symptom and if the ileus progresses, often turns into a dull, steady boring pain. Vomiting is not much delayed, as a rule, and may become almost continuous. The vomited material is of dark green, or brown color, and in advanced cases has a fecal odor. In general, the symptoms are the same as those which accompany any intestinal obstruction, and are too well known to require further comment. A flat x-ray picture will show dilated loops of the small intestine and is a very reliable diagnostic sign.

### Treatment

Of all the things which may be said concerning the treatment of adynamic ileus, the most important part can be expressed by the use of the one word, prevention. Ileus in at least a mild form is an almost invariable complication of abdominal operations, peritonitis and mechanical obstructions and when viewed in this light is not entirely possible of prevention, but it is possible to take cognizance of its presence and institute such measures as will be calculated to prevent it from increasing to such an extent that it will endanger the life of the individual. On account of the fact that the ileus may be due to various causes, it will be found that treatment will have to vary in some particulars, on account of special features afforded by the primary condition to which the ileus is secondary. But in the main, the general fundamental principles of treatment will be applicable, regardless of its cause.

For the prevention of ileus and for treatment of the mild cases, the following measures are recommended:

The possibility of air being swallowed by the patient should receive early consideration. McIver, Benedict and Cline have shown that swallowed air is one of the important causes of adynamic ileus reaching beyond a mild stage. Alvarez has stated that swallowed air will not reach the intestine in any appreciable amount with the patient in the upright position; it, therefore, seems logical that there will be less trouble from this source with a patient in the Fowler position and in practice the rationale of the procedure seems to be confirmed. This position, however, should not be used where impairment of the circulation will more than off-set its advantage. Water should not be given by mouth until all nausea and vomiting have subsided, and it can be taken without discomfort or distention. Morphine, instead of "splinting" the intestinal tract, or arresting peristalsis, as it was formerly supposed to do, is now known to be a stimulant to intestinal tone and peristalsis. This was first demonstrated by Plant and Miller and since confirmed by numerous other workers. When given in large doses, it may even cause a reversed peristalsis. It should be given in sufficient amounts to relieve pain and keep the patient quiet, this will ordinarily be about the correct amount to secure its best effect upon the intestine. Heat to the abdomen is very beneficial and affords a great deal of comfort to the patient. Pituitrin has been used extensively in an effort to stimulate peristalsis, but in general its use has been disappointing. Physostigmine is of benefit in a fair percentage of cases, but intravenous hypertonic saline solution, or some modification such as Ringer's or Hartman's solution have proved to be the most consistently effective agents for stimulating propulsive activity. This hypertonic solution may be given 10 per cent strength and in doses of ten to twenty c. c. at a time. Cathartics are absolutely and positively contra-indicated. The colon tube and an occasional enema are useful in relieving the colon gas, but the frequent and persistent use of irritating enemas cannot be too strongly condemned. By aggravating the ileus, they cause far more trouble than they eliminate. Fluids should be given in sufficient quantities to maintain the physiologic balance. Normal saline solution is usually sufficient for the mild cases. It may be given by proctoclysis, hypodermoclysis, or intravenously. Proctoclysis is the least satisfactory method and may aggravate the ileus, hypodermoclysis and intravenous administration are both satisfactory. It should be given very slowly and should not be pushed to the extent that the patient will become waterlogged. If the patient is in need of nourishment, this can be given in the form of glucose solution, and as a general rule, it may be stated that the longer the duration of the illness, the greater the indication for glucose will become. There is considerable doubt as to whether glucose is absorbed from the bowel in any appreciable

quantity, except when given in very high dilutions, but it can be administered intravenously and by hypodermoclysis. It is usually given intravenously in five or ten per cent solution and should be given very slowly to prevent reactions. Ochsner and Gage have shown that when given in ten per cent strength, it will cause inhibition of intestinal tone in the majority of cases, and recommend that insulin be added in the strength of approximately one unit of insulin to each two or three grams of glucose. This prevents its depressing effect upon the intestine and when used in this manner, the intestinal function, instead of being inhibited, will frequently be stimulated. It can be given by hypodermoclysis in a three or four per cent solution, this is a satisfactory method of administration. Gastric and duodenal drainage with the duodenal tube will remove gas and fluids from the stomach and intestine, and will greatly aid in keeping down distention, this will be considered later. In the severe cases, the measures used in prevention and in the treatment of the mild cases must be continued and it must be remembered that the patient who is seriously ill from adynamic ileus, is seriously ill from an intestinal obstruction, and that relief of this obstruction is absolutely necessary for recovery. It is, therefore, imperative that the water and chemical balance be restored and that intestinal distention be relieved and function reestablished. The use of oxygen by inhalation is also beneficial in preventing anoxemia. The water and chemical imbalance must be corrected by the administration of saline solution. This can be used by hypodermoclysis in any strength from the normal to a two per cent solution and can be given intravenously in any strength from the normal to a ten per cent solution. Orr states that in the severe cases it may be used in five per cent solution and in quantities up to 500 c. c. intravenously, which must be given very slowly. After this has been given the normal solution will usually suffice to maintain the water and chemical balance. The requirements of the particular case in hand must be the guide by which the strength and quantity of these solutions are administered. Relief of distention must be obtained and in the general run of cases it can be better and more certainly accomplished through the aid of artificial drainage. There are two distinct methods for procuring this drainage which deserve special attention. One is by the use of the duodenal tube, and the other, is by enterostomy.

The duodenal tube has been used at various times for the removal of gastric and regurgitated intestinal contents for a number of years, but it never seemed to gain a foothold and come into prominence as a therapeutic agent until the past three or four years. During the past few months Wangensteen, Paine, Carlson and others, have had published several very instructive articles concerning its use which have had a great influence in its establishment as a sound and practical procedure. The Levin tube which can be introduced through the nose and passed into the stomach and duodenum, or the Dutte tube which can be introduced in the same manner, when attached to a negative pressure instrument, as suggested by Robertson Ward, makes a very effective instrument for relieving gastric and intestinal distention caused by gas and fluids. An apparatus employing the water suction principle which fulfills all the requirements for negative pressure is very simple and easily constructed. A syringe may be used to an advantage in some cases, but as a rule, the suction is so strong that it pulls the mucus membrane into the tube and blocks it, but the water suction apparatus can be so regulated that it will produce the correct degree of negative pressure, and can be used continuously. It has been shown that the suction instrument works best when placed at a level which will give the water column in the tube a fall of approximately 2½ feet. The tube should be introduced far enough into the stomach that it can pass into the duodenum. This not only removes swallowed air from the stomach and prevents it from reaching the intestine, but it also removes gas and fluids which are already present in the intestine. It should be used continuously until intestinal function has returned. With the tube in place, water may be taken as desired for it is immediately drained away and does no harm, but it is a source of much satisfaction to the patient.

The enterostomy tube is simple, but when used in time, is a very effective instrument for intestinal drainage. It should be just large enough to permit the passage of gas and fluids, one the size of a fourteen or sixteen catheter is sufficient. If it becomes plugged with fecal contents it can be opened by passing saline solution through it with a syringe. The use of a large tube is entirely unnecessary and is often the cause of complaints raised against enterostomy. It should be placed just above the point of obstruction. In this way all the available intestine is saved for absorptive purposes. An enterostomy is a simple operation which can be executed within a very few minutes, and when correctly done, is not only effective, but is a relatively safe procedure, and the opening will almost always close promptly after the tube is removed, a great many of them will stop leaking intestinal contents within forty-eight hours.

In the past we have all seen cases where we wished for a fecal fistula. A minature fecal fistula is exactly what we have in an enterostomy, but the enterostomy, has the advantage of giving us what we want at a time when we need it most and then closing when we are through with it.

It should be understood that tube drainage is not for the primary purpose of removing toxins, but is for the purpose of relieving intestinal distention. If this can be accomplished, the toxins within the intestinal tract will not become an important factor.

### Comparative Advantages and Disadvantages of the Two Methods of Intestinal Drainage

Nasal catheter suction will relieve the distention in a great many cases of adynamic ileus regardless of the cause and does not require an abdominal operation for its use. It is sufficient to control the vast majority of cases of post operative distention. It is more effective in ileus arising from high intestinal involvement than an enterostomy placed in the lower part of the intestine, and an enterostomy located in the jejunum is likely to result in a fistula on account of the digestive juices coming through and interfering with closure. It is, therefore, the procedure of choice between the two methods in all cases of adynamic ileus originating in the upper part of the intestine. It is preeminently the procedure of choice where for any reason abdominal operation is contraindicated. In cases of mechanical obstruction where a positive diagnosis cannot immediately be made, it is a very valuable and available procedure and should be used during the time of observation necessary for a definite diagnosis. In the cases of mechanical obstruction requiring operation, which are associated with distention and dehydration, it will be of great value in removing stomach contents and relieving distention, while the patient may at the same time be receiving fluids and put into better condition for operation. By this pre-operative management, the patient is placed in a much better condition to stand operation and the operative difficulties are greatly reduced, thereby, lessening trauma and shock. Finally, as has been demonstrated by Wangenstein, Willard Bartlett, Jr., and others, nasal catheter suction drainage with restoration of water and chemical balance will prove to be all that is required for relief of many cases of complete mechanical obstruction of adhesive origin, whether the adhesions are recent or old. These are cases where adhesive bands have so constricted or angulated a loop of intestine that the circulation has also been impaired and caused the development of an added edema sufficient to complete the occlusion of the intestinal lumen, and through relief of distention and improvement of the circulation within the intestinal wall, the edema subsides and patency of the lumen is re-established.

There are two disadvantages to this method. One, is the simple fact that a few patients will not permit the tube to remain in position. But the great majority can be persuaded to consent to its use. The administration of sedatives will aid in securing co operation of the frightened or obstinate individual. The other disadvantage is, that it removes the fluids and chemicals and prevents their being reabsorbed, the patient, therefore, requires more attention to the water and chemical balance. This disadvantage, however, is not so great as it might appear at first thought, for most of the fluids would not be absorbed anyhow and when the positive pyloric balance, as described by Bartlett, is re-established, they will have a natural tendency to pass downward and away from the tube.

In a general way it may be stated that an enterostomy is indicated in all cases of adynamic ileus requiring intestinal drainage, where for any reason nasal catheter suction cannot be employed, or results cannot be obtained by its use. It causes no discomfort and is well borne by all patients. It can in almost every case be done under local anesthesia and through a very small incision. If the incision is so placed that the first protruding loop of intestine will serve as an advantageous location for the enterostomy, it can be done with very little trauma and has the advantage of drainage from below and permitting the fluids poured into the upper part of the intestine to pass downward for reabsorption. It has its greatest field of comparative usefulness, in cases where the ileus results from involvement of the lower part of the intestine. Here, it has a direct approach to the area where the ileus originates and does not have to drain the intestine from such a distance as would be required of the duodenal tube. It drains in the direction of the normal intestinal gradient; in other words, it is in the path of the natural fecal current. It also diverts the current away from the ileo-cecal sphincter, which is contracted in ileus and has a tendency to set up a resistance. In this manner the enterostomy tube affords an opportunity for the impaired intestine to function with such remaining capacity as it has without having to overcome the resistance of a contracted sphincter.

Neither of the two methods forbids the use of the other and if necessary both may be used at the same time.

Drainage by either method will be more

effective if the position of the patient is occasionally changed in order that the position of the intestinal loops may be changed, thereby, removing kinks and angulations so that trapped gas and fluid may be released and forced into position for removal. Light massage of the abdomen will also be of some benefit in accomplishing the same purpose.

While both methods have their special features, there is one outstanding advantage which nasal catheter suction has over enterostomy, that is, it does not require an abdominal operation for its use. And in cases where operation is not warranted, especially in the seriously ill, if nasal catheter suction can be used with effect, even though it does not exactly fulfill all theoretical requirements, it should be the procedure of choice on account of it not adding additional cause for ileus, such as would be forced upon the patient by the abdominal operation necessary for enterostomy. In this case any advantage gained on the side of accessibility by enterostomy over nasal catheter suction might be offset by the untoward effect of the operation.

The greatest field of usefulness for enterostomy will be found where operation is indicated for the primary condition and the necessity for low intestinal drainage can be determined at the time of operation. It can then be used with but little extra work and with no discomfort or annoyance to the patient.

Intestinal drainage is a life saving procedure and if used in time will be of tremendous value in the treatment of ileus. It must be employed before permanent damage to the intestinal wall has taken place. If this is not done the patient will be deprived of one of the most effective remedies which we have at our command. This drainage should be continued until the gastro-intestinal tract has regained its function.

In the meantime, fluids and chemicals to maintain the water and chemical balance must be administered along with such supportive treatment as may be required

The use of these measures, together with adequate general treatment of the patient will save many lives that would otherwise be lost.

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**Ascorbic Acid in Scurvy.**—Schultzer presents a case of scurvy in aman of 68 who was cured with ascorbic acid. The daily intravenous injection of 40 mg. of ascorbic acid resulted in rapid recovery from the scurvy. He believes it doubtful whether the 40 mg. of ascorbic acid if given by mouth would have produced the same effect, especially in view of the fact that the patient suffered from gastric achylia.

## VITAMINES, A DISCUSSION OF OUR KNOWLEDGE TO THE PRESENT TIME*

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Nomenclature:—In 1914 Funk of Weisbaden suggested the name Vitamine for material he had isolated from rice polishings and yeast and proved to be effective against beriberi. He thought his material was of vital importance to living organisms; he also believed that it belonged, chemically, to the Amin Group. Hence his proposal, "Die Vitamine," meaning vital amine. The word vital is derived from the Latin Vita meaning life. Amine is a substance derived from ammonia by replacing hydrogen atoms by hydrocarbon radicals; when an amine is added to an acid a salt is the result. The terminology, therefore, may be considered controversial. There is no chemical evidence that these substances, with the possible exception of Vitamine B, have an amino structure. The popular names in use are withal no less scientific than those the scientists have adopted. Thus, anti-infective for A, anti-neuritic for B, anti-scorbutic for C., anti-rachitic for D. This latter has also been called Sunshine Vitamin and proprietary interest claimed which had to be settled in court.

There have already been named some seven, and if the nomenclature remains confined to alphabetical titles, one wonders what will happen after twenty-six have been named. As the knowledge of these factors in foods increases, it may be possible to designate them on their chemical composition, which would be more rational.

Historical:—For nearly a century it has been recognized that a diet composed of the elements found in carbohydrate, protein and fat, with a supply of inorganic substances and water, will not maintain a normal nutritional state.

An adequate diet must furnish at least eleven inorganic elements. These are:—calcium, copper, chlorine, iron, iodine, magnesium, manganese, phosphorus, potassium, odium and sulphur. Even that list may not be complete. It is agreed that there are at least six vitamins. Four more are problematic. Hence an adequate diet must provide some thirty-seven relatively simple substances all well-known to the chemist. Leave out any one and nutritive failure supervenes. The type of malnutrition for each of these nutriment principles is characteristic, hence there are some thirty-seven deficiency diseases.

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*Read before the Councilors' District Meeting, Williamstown, September 19th, 1933.

Classification: The facts, so far as known, about Vitamines are summarized in the following table modified from Cowgill:—

TABLE I.

The Vitamines.

| Name | Source. | Action. |
|---|---|---|
| Vitamin A, fat soluble | Cod-liver oil, butter, cream, egg yolk, tomato, spinach, orange, nuts, cereals, cabbage, celery, sea plants. | Body growth, Estrual cycle and ovulation. Prevents or cures xerothalmia, sinusitis, infection of salivary glands, lung, kidney. Deficiency causes injury to epithelial tissues. |
| Vitamin B Water-soluble | Brewer's yeast, wheat embryo, tomato, spinach, milk, liver, peanuts, orange, muscle, pecans, egg yolk. | $B_1$. Anti neuritic; Prevents or cures Beriberi, cutaneous ulcers. Maintains appetite. Destroyed by heat. |
| $B_2$ and $B_3$ are called F and G. | | $B_2$. Growth promoting; Heat stable. |
| | | $B_3$ Pellagra-preventive. Heat stable. |
| Vitamin C. Water-soluble. | Orange, tomato, cabbage (raw), lettuce, grapefruit, sprouted grain, carrots, (raw) milk. | Anti scorbutic. |
| Vitamin D. Fat-soluble. Probably identical with substance formed by Ultra violet rays on ergostural. | Cod-liver oil, Halibut-liver oil, butter, cream, egg yolk. | Anti rachitic. |
| Vitamin E. Fat-soluble. | Wheat embryo, lettuce, cereals, muscle, butter, visceral organs. | Cures and prevents sterility of resorbtion gestation. |

The spectacular effects of vitamin deficiency have attracted the major attention during the past twenty years.

It soon came to be known that a mixture of the chemical elements making up these proximate principles did not meet normal nutritional requirements For nearly an hundred years scientists have been trying to solve the cause of this failure. Much data concerning the evidences of deficiencies resulting from such feeding efforts was accumulated. The term deficiency disease came into common usage and their symptoms were described in detail. They were produced in the laboratory on animals almost at will and these animals came to be a part of every scientific exhibit of the National medical bodies. The cause and nature of the deficiency substance or substances remained an unsolved enigma.

The first helpful suggestion for a solution came in 1912, when F. G. Hopkins published a paper in the Journal of Physiology detailing the studies of six years, showing that milk contained a hitherto unrecognized substance which supplied the deficiency of such a diet for animals and maintained normal growth. During the next few years an enormous amount of experimental work was done by many investigators, all tending to show that in addition to the proximate principles, carbohydrate, protein, fat and mineral salts, minute amounts of something else were essential. These essentials came to be referred to as food hormones, accessory dietary essentials, accessory food substances and finally as vitamines. In this galaxy of scientists appear the names of Mendel, Osborne, Funk, McCollum, Holst, Frolich, Evans, Bishop, Kennedy and Drummond.

As soon as it was recognized that there was more than one of these substances, a

classification was suggested by McCollum and Kennedy in 1916, giving a letter to each and its solubility as a classification. Hence the literature came to teem with discussions of fat-soluble A vitamine, water-soluble B vitamine, etc. This apparently satisfied everybody until 1920, when Drummond called attention to the usual interpretation of a final "e" by chemists as meaning that the exact chemical structure of a given substance was known. Since the composition of vitamines was not known vita-m-i-n-e became vita-m-i-n as the term to designate the group. Whenever the molecular structure is worked out new names will, perhaps, be chosen. Already Vitamin B has been divided into $B_1$, $B_2$ and $B_3$.

The United States Pharmacopoeia No. XI, now in process of revision, is co-operating through its Board of Trustees with the medical and pharmaceutical professions of other countries, looking to the agreement on an international standard for vitamins. An effort is being made to conform the standard to be adopted with that issued by the Permanent Commission on Biological Standards of the Health Organization of the League of Nations. The representative of the United States on this Health Section of the League of Nations is E. A. Doisy, Professor of Biochemistry, St. Louis University, Medical School.

In order to carry out this plan satisfactorily there has been set up by the United States Pharmacopoeia a Vitamin Advisory Board. This Board includes a group of laboratories that are now engaged in the work of developing satisfactory vitamin assay methods for Vitamins A and D. A special "reference cod liver oil" has been distributed to be used as a standard of comparison in assaying vitamin content of either foods or medicines. The United States Food and Drug Administration and its director of the Government Vitamin laboratory, Dr. Nelson, are co-operating in this work.

The interest and co-operation of the vitamin experts throughout the United States has been accorded the U. S. P. in this important work. Without such co-operation the expense of this work would be so great as to render it impossible for the U. S. P. to carry it on. The following standards have been recommended for adoption:— The new "U. S. P. Vitamin A" and the "U. S. P. Vitamin D." Units are to be identical with the international units. The minimum Vitamin A standard for U. S. P. cod liver oil shall be not less than 600 international units. The minimum Vitamin D standard for U. S. P. cod liver oil shall be not less than 85 international units.

### Vitamin A.

Historical: Vitamin A comes first alphabetically, but second chronologically. Its role as an accessory food factor was established in 1913 by McCollum and Davis and simultaneously by Osborne and Mendel. Their studies grew out of observance in the experimental laboratory of failure of rats to grow normally on rations lacking fat.

Chemical Composition: Vitamin A is associated with that part of animal fat which cannot be saponified. This fraction seems to be largely made up of monatomic alcohols and the latest laboratory work seems to indicate that this vitamin may be an unsaturated alcohol of the sterol group.

Evidences of Deficiency: In Vitamin A deficiency the epithelial tissues are the primary seat of damage. So general is the injury to these tissues that one feels warranted in stating that whatever other physiological damage may obtain is but secondary to impairment or loss of function of this type of cell. As all secretory organs are specialized epithelial cells, the results of injury or destruction of these cells must exert a profound influence on the general bodily health. The characteristic effect of Vitamin A deficiency is a replacement of normal epithelium of the respiratory, alimentary and genitro-urinary systems, the eyes and paraocular glands with stratified, keratinized cells resembling those of the skin. With this change in structural appearance comes loss of physiological function. The reprodnctive glands become more susceptible to infections and impotence and sterility result. A higher incidence to urinary calculi obtains because of increased crystallization and stagnation. It appears that feeding an expectant mother a diet high in Vitamine A does not appreciably increase the vitamin store in the child. Likewise, feeding carotene to the nursing mother does not raise the reserve of Vitamine A in the nursling.

The eye changes are almost classic. The lids swell, the conjunctivae become inflamed, the cornea sloughs, the tears become deficient. The xerophthalmia resulting is, of course, an infections process, but it is significant that on no treatment other than a diet containing an adequate amount of Vitamin A recovery ensues.

The secretion of the glands in the digestive tract is lessened and digestion as well as appetite is impaired. The mouth is dry and ulcers appear at the base of the tongue. A diarrhea may develop and a form of mucous colitis is common. Cystic degeneration of the pancreas has been observed and the relationship of Vitamin A deficiency to peptic ulcer is an alluring topic. Intestinal atony, changes in haustral markings in the colon and

malnutrition are easily established.

Infections of the respiratory tract become more easily established. The lower grades of naso-pharyngeal and of tracheo bronchial "catarrh" develop easily and often. Pneumonias have bulked rather large in these deficiency groups.

The skin participates in the gland Vitamin A deficiency. In infants it may be dry, scaly, even shrivelled; the sebaceous and sudoriferous glands are inactive; pigmentation has been described and the hair and nails suffer. Infections are an easy acquisition,—acne, furunculosis and carbuncles, to mention only a few.

In addition to being a barrier defense factor, Vitamin A has important relation to body growth. When an animal is put on a diet furnishing no Vitamin A, it grows for a period of eight to ten weeks at about a normal rate, then its growth slows down and soon ceases. An adequate supply, then, becomes a matter of importance during infancy and childhood. In the adult it is necessary for a good state of nutrition and vigor.

Sources of Vitamin A: Vitamin A occurs in both animal and vegetable fats. Cod liver oil furnished 250 times as much as does butter. The content in milk varies; during the summer when the cows are grazing the quantity in milk increases. Nuts contain very small amounts. Egg yolk is a good source. Other fish livers are now utilized and some, such as the halibut, have considerably augmented the available supply. In plants the leaves are the richest source of supply, roots next and least in the grain. Carrots, sweet potato, spinach, lettuce, escarole, tomato and yeast are sources of a fair supply.

Vitamin A potency in vegetable foods appears associated with yellow pigmentation. Carotene is the pigment of carrots and other yellow vegetables, as well as green ones. This is the mother-substance of Vitamin A. It can be changed to Vitamin A by incubation with liver. This is probably an enzyme action. It can be extracted and occurs as copper-colored lustrous crystals. Chemically it is a carbon and hydrogen molecule with a formula of $C_{40}H_{56}$.

## Vitamin B.

Historical: This was the firstborn of this strangely interesting family. First thought to be a single entity, it soon came to be recognized that there were two factors—one which when withheld from the diet resulted in a polyneuritis, the other could prevent and cure the pellagric state. The latter was first called $B_2$, but is now called Vitamin G.

Chemical Nature: Though the subject of intensive study for some twenty-years, the chemical nature of Vitamin B is still unknown. Animals fed on polished rice developed beri beri, the outstanding symptom of which was a polyneuritis. It was in connection with a study of this symptom in beri beri that Vitamin B was discovered by Funk. This disease has obtained for two thousand years among the Oriental rice eaters and has caused the death of millions. The nearest approach to a description of the nature of Vitamin B by the chemist is the statement carried in the literature of manufacturers stating "it appears to be a basic substance of relatively simple composition. In the effort at separation of the original compound called Vitamine B it was found that the anti neuritic factor was readily soluble in alcohol, was destroyed by high temperatures and was unstable in alkaline solutions.

Evidences of Deficiency: Since an adequate supply of Vitamin B merely promotes a healthy state in either man or lower animals, the evidences of an adequate supply serve the means of study of its role in preserving health. Evidences of Vitamin B starvation may now be detected long before the outstanding result—polyneuritis—makes its appearance.

The growth of young animals is retarded by Vitamin B deficiency. This retardation applies to both gain in weight and increase in stature. The observations that have been made on B as it affects growth have led to the query,—Is B as now accredited composed of a factor independent of the anti neuritic factor? It is coming to be believed that this vitamin will be subjected to another cleavage in its nomenclature and a new vitamine added to this growing family. One of the evidences of this possibility is the discovery that the anti neuritic factor found in yeast may be destroyed by a high temperature and yet the yeast, so treated, still contains a factor that promotes normal growth in the young experimental animal. There is not yet an unanimity of opinion among authorities on this point. Some contend that there is no need for reference to a "growth-producing factor," independently, as normal growth necessitates an adequate supply of the anti-neuritic factor also. Such reasoning does not seem sound to me. By analogy, both thyroid and pituitary activity are essential for normal growth, yet the two are not histologically, physiologically or chemically identical.

Appetite is early affected in B deficiency. The commonly used control experiment of feeding dogs commercial beef extract which contains no B Vitamin uniformly results in definite anorexia. This should prove disconcerting to clinicians who continue to stimulate an appetite in their patients by feeding beef extracts. The appetite can be stimulated

when the vitamin is given intravenously; this is an added step in establishing the specific relation B bears to the sense of hunger. There is also a definite relationship between the size of the animal or patient and the amount of food containing the vitamin required to maintain a normal appetite. This brings into open view the question of quantitative standards for an essential diet. In other words, Is there a possibility of thinking of this vitamin in terms of dosage. It must be remarked that an anorexia is not always to be thought of in terms of Vitamin B deficiency. While a marasmic infant may show a spectacular improvement when food rich in B is given, it must be remembered that there are many causes of under-nutrition and lack of appetite. One not infrequently hears the assertion that the clinician need not concern himself about B deficiency, since the average American diet furnishes an adequate amount of this vitamin. This is not disputed; the question for the clinician to decide is, "Does his patient get an adequate supply?"

Atony of the musculature of the digestive tract is a rather constant but late evidence of B deficiency. Along with this derangement of the muscular mechanism is found impairment of the secretory functions. These may have a related causative influence on the hunger sense just discussed. Enthusiasts are adding to this simpler statement the suggestion that to anorexia and constipation, demonstrably B deficiency, there be added colitis and indigestion with their sequelae, flatus, eructation, discomfort, headache and visceroptosis. Then, if one adds to these the results of malnutrition—asthenia, fatigueability, loss of weight, susceptibility to infections, tardy convalescence,—the list begins to assume imposing scope. The literature grows, perhaps, too rapidly, for it should not precede growth of dependable knowledge, and one reads the bold statement that "Vitamin B deficiency may be considered a contributory etiological factor and certainly as a complicating factor of serious moment in gastric and duodenal ulcers."

That Vitamin B bears some relation to lactation and that some of the gastro-intestinal upsets of nurselings may be associated with B deficiency is a possibility. Healthy puppies put on the milk of mothers suffering from experimental beri beri develop that condition in turn and promptly recover when put back on milk from healthy mothers again. It may, then, become a matter of some importance for the physician to be assured of an adequate diet for both the expectant and nursing mother. It would seem entirely reasonable to postulate the nursing animal or human needs more Vitamin B than she would require under ordinary conditions. When, however, one reads that Vitamin B content of human milk is inferior to that of cow's milk and cannot be regarded as an excellent source of this dietary essential as Macy concluded, the limits of credulity are reached. The exact requirements of the human infant for Vitamin B cannot be stated, as experimental evidence is not possible except on the young of animals. When the young of the human is found to be suffering from this deficiency the only method of determining the adequacy of B in its mother's milk would be to transfer the feeding to the young of animals, and it might well be that by that time the deficiency no longer existed in the suspected mother's milk. When one considers the millions of infants reared on their mother's milk and, further this is part of Nature's plan, one must view Macy's conclusions much in the same light as one should the suggestion that mother's milk should be pasteurized.

The Skin and Vitamin B Deficiency: Ulcers,, especially on bony prominences, are common results on experimental animals. Their appearance on a deficient diet and healing on an adequate diet, repeatedly observed in the same animal, are noteworthy. These ulcers show a remarkable symmetry in distribution, as well as an absence of the usual evidences of infection. The malnutritional nature of these ulcers seems established and it seems, further, that it is not deficiency of the growth hormone of B (Vitamin H), but of the antineuritic hormone that causes the ulcers. It would seem that Vitamin deficiency may not be the only explanation for these necroses; trauma, pressure and other factors may play a part. Their appearance suggests an analogy to decubital ulcers, such as the typhoid bedsore, and yet one may wonder if the more frequent occurrence of bed sores in typhoid two decades ago might not have been a deficiency problem. Certainly it seems that the modern diet and freedom from bed sores may be inter-related.

It has been suggested that herpes was a deficiency disturbance. Reports of such cases treated with yeast vitamin powder have appeared in the literature. If herpes be the result of a neuritic insult, the theory that it is dependent upon an avitaminosis becomes tenable; if herpes, on the other hand, be a virus infection, it would appear unlikely it can be both.

The Nerve Tissues and B Deficiency: The nervous system is the primary seat of damage in B deficiency. Polyneuritis or beri beri represents the extreme of this deficiency and remains one of the world's health problems. It is endemic in Chinia, Japan, the Malay peninsula, East Indies, Phillipines and cer-

tain parts of Africa. Sporadic cases may develop anywhere, and do. The similarity of food habits where the condition is endemic is noteworthy; in Spain, for example, polyneuritis was unknown until milled white rice was introduced.

It was while studying the effects of decorticated rice on fowls that F unk found that the neuritic symptoms could be prevented by feeding at the same time alcoholic or watery extracts of rice polishings. This he named vitamin. The polyneuritis thus induced in animals or fowls is now known to be identical with beri beri in man. The story of the study of this deficiency is replete with interest and saturated with disputes. Many and frequent have been the efforts to establish the denial that the disease was of deficiency origin. One of these was the experiment of feeding beri beri cases finely milled wheat flour and when no improvement obtained, the damning deficiency theory was annulled, not realizing that finely milled wheat flour is as deficient in B as was the decorticated rice. Another line of attack came from the observation that a starving man did not develop beri beri, not remembering that the depletion period of the disease is about three months and no one could live three months without food.

The post-mortem picture of beri beri is often that of a well nourished patient. The heart is often enlarged and may be dilated. The right heart is more involved than the left and may be the only part affected. The myocardium shows hyaline and fatty degeneration with fragmentation on necropsy studies. There may be edema, anasarca, hydropericardium, hydrothorax and ascites. There is usually some edema of the legs even in the absence of the above effusions. A passive congestion of the abdominal viscera is usual, ecchymoses are common. There is a medullary degeneration of the peripheral nerves; the axis cylinder is fragmented and the sheath is degenerated. The sympathetic system undergoes similar changes. The spinal cord may be congested, even edematous; the fibres may show the same changes as the peripheral nerves. The anterior horn and the posterior spinal ganglia may show the same changes. The brain is not exempt and proliferation of neuroglia with degeneration of the cells occur. It is remarkable that there are no mental symptoms corresponding to the necropsy findings. The changes found in the muscles are probably the result of the nerve degeneration. In short, it may be stated that the post mortem changes of beri beri are not found in any other condition. This peculiar combination consists of (a) nerve lesions, (b) enlarged right heart, (c) edema and effusions without nephritis and (d) congestion of the abdominal organs.

The clinical picture may easily be constructed from the post mortem findings. It appears that the body cannot store up a supply of the vitamine, hence physical impairment must begin with the deficiency, and its extent will be in keeping with the approach to zero of the deficiency in the diet. This happens in the experimental animal or fowl; for instance, in seven days after a pigeon fed on decorticated rice, changes can be demonstrated in the peripheral nerves. This degree of impairment does not yield clinical phenomena, however, and these have been determined to begin in about three months. This applies only when the diet is limited to decorticated rice. If other vegetables be added, the deficiency is not complete and the symptoms appear at longer periods. This period is called the depletion period.

When symptoms and signs do appear they may be grouped under three headings:

(a) Those referable to the degeneration of the nervous system.

(b) Those caused by the edema and the effusions.

(c) Those incident to the cardiac changes and passive congestion of viscera.

Depending on the stage, there may be toe drop with a steppage gait, later ataxia with a positive Rhomberg, and finally the patient merely shuffles along with the aid of furniture. If spasticity develops it is usually an evidence of improvement. This stage resembles spastic spinal paralysis. The reaction of degeneration is present. Deep reflexes are diminished or lost; the patellars may be lost for months and yet complete recovery occur.

Sensory disturbances in the nature of anesthesias, parasthesias, thermal and pain sense disturbance loss may be observed. These are more annoying than serious. Muscle soreness is an early finding; later weakness and atrophy appear. The atrophy may be masked by the accompanying edema. This edema varies from slight pretibial pitting to a complete waterlogging. He tires easily, digestive disturbances are in evidence and may become severe, evidenced by nausea, vomiting and diarrhoea. Dyspnea, palpitation, precordial pain, heart hurry, arrhythmias and murmurs appear; some of these are common and when precordial pain occurs it is usually due to dilatation. Death is usually a cardiac one. Aphonia is common and is probably the result of degeneration of the vagi. The condition is afebrile and there are no helpful findings in the blood picture or urine.

Regeneration is slow and may not be complete; convalescence may take months or death may be sudden. So-called Infantile beri beri differs in no wise from the condition

found in adults. It was not thought to exist in infants until Hirota's work in 1898. If the infant is nursing the mother's breast, development of the condition implies the mother has beri beri, latent or manifest. Puppies fed on the milk of such mothers develop polyneuritis. Then infants may be cured by either correcting the diet deficiency in the mother or by feeding vitamin-containing substances.

Sources of Vitamin B: Wheat germ is rich in this vitamine; it is the source of much of the manufactured product on the market. Squibbs Vitavose, for example, is made from this source and the manufacturer claims it contains one hundred times the B content of cow's milk.

Milk is a good source. The commercial dried milk preparations seem to have lost little of the vitamin by preparation. Brewer's yeast, eggs, heart muscle, liver, brains, tomato, spinach, peanuts, orange, red meats and pecans furnish B in varying but satisfactory amounts. Many other articles of food furnish small amounts, the sum total of which affords no inconsiderable supply. High temperatures destroy the vitamin, hence canned foods are poor foods in contrast with fresh vegetables and boiled milk with fresh milk. A dinner of oyster cocktail, white bread, chicken, gravy, macaroni, candied yams and honey sounds appetizing, but beri beri stalks on the heels of such epicurean adventure prolonged for three months.

### Vitamin C.

Historical: Scurvy has determined the story of man as definitely, perhaps, as has any other disease. It hampered sea faring both as to discovery and commerce, it wasted besieged populations and was the scourge of armies. The first light on its cause came in 1912 in the work of Holst and Frolich. Since that time the disease has been produced experimentally in guinea pigs and monkeys. It has not been produced in fowl, rats or dogs. Why these are immune is an interesting query. Is it because they have a low requirement for Vitamin C, hence can live on undemonstrable amounts; or is it because they can synthetize the vitamin?

Chemical Nature: This is the vitamin of raw fruits and vegetables. It is destroyed by heat and by dessication, done slowly and in the presence of oxygen. Cooking slowly and over a long period destroys more of the vitamin than higher temperatures for short periods. It has been extracted and crystallized as ascorbic acid. It is very unstable, being especially sensitive to oxidation and the high acidity of fruits and vegetables containing it appears to protect it against this alkali.

Evidences of Deficiency: While originally scorbutis was seen in all ages and especially the active adult, now its study is chiefly a matter of observation of the child. It is the endothelial cell structure that suffers, primarily, from C deficiency. This means damage to vascular structures with hemorrhage. These may occur in any part of the body. Bone cells are affected, resulting in rarefaction. The cells of the dentine are very sensitive to C deficieney; the odontoblasts become damaged and of unequal lengths, separating from the dentine and rupturing the filaments; the odontoblastic layer degenerates into islands of distorted cells and pulp death results; apical abscesses result from this pulp death. If scurvy develops early during gestation, premature or stillbirths and retarded growth of the viable child are to be expected; when it develops toward the end of gestation, the child is usually born alive, but has latent scurvy.

After birth this latent or sub-acute form may present only obscure, ill defined symptoms. The onset is often insidious and restlessness and irritability or lassitude and mental apathy may be harbingers of a graver condition later. When fullblown the scorbutic child presents edema of the ankles, joint pains, an irregular bowel activity, a low temperature range, swollen, spongy, purplish, bleeding gums, a swollen tongue, a capricious appetite, fetor oris, necrosis of the alveolar process, the nails are discolored and onychia is common; petechiae or frank cutaneous hemorrhage, which may take the form of herpes or pemphigus; or they may be large and appear as ecchymoses; the hemorrhage may occur in a muscle or under the periosteum; orbital hemorrhages, hemoptysis, hematemesis, hematuria, melena, hemorrhage from the uterus, pleura and peritoneum and pericardium may be observed. A positive tourniquet test is usually found. A chlorotic type of anemia is the rule and the coagulation and bleeding time, as well as clot retraction, are about normal. The pulse is rapid, feeble; the right side of the heart hypertrophies and hemic murmurs are common. The x-ray study of the bones shows a ground-glass appearance of the shaft, a broadening of the zone of temporary calcification at the shaft ends, thinning of the shaft cortex and a ring around the epiphyseal center of ossification, and still later separation of the epiphyses.

Source of Supply: Differing from Vitamin A, C is not stored in the body in protective quantities, hence the necessity of daily intake. The fresh cortex of the adrenals is a potent source; it is found in all fresh fruits and fresh vegetables, but exists in larger amounts in those with considerable

acid for reasons already referred to. Oranges, lemons, limes, tomatoes, cabbage, carrots and beets furnish the largest amounts. Canning and drying as formerly done destroyed much of this vitamin, but under modern methods canned tomatoes, for example, lose a relatively small per cent. When canned tomatoes or juice are served they should be merely warmed, not boiled. Potatoes contain a small quantity of C and prolonged boiling should be avoided. Milk from various sources contains some. The amount furnished from any milk supply is variable. This variation depends upon the food of the animal; in summer milk is richer in C than winter milk. Boiling removes most, while pasteurization even may cause a serious diminution. The ease with which it may be destroyed may be demonstrated by the vigorous shaking of a half-filled bottle. Aging of milk, also, lessens the C content materially.

### Vitamin D.

Historical: The existence of this vitamin was established in 1922, though Mellanby demonstrated the relation of rickets to faulty diet in 1919. It has figured largely in the lay literature as "sunshine vitamin," while the makers of cod liver oil have overlooked no opportunity to strengthen the appeal for "straight legs" and "well-shaped heads" and "full chests." Then, too, the makers of ultra violet lamps have told the public over and over that fog and clouds and smoke and clothing keep the baby from his daily dose of sunshine-vitamin. Even the makers of window glass have affected to sense the baby's danger and have developed a glass that permits the shut-in to get his dose without joining a nudist colony.

Chemical Nature: The literature on Rickets is extensive and out of it one may read that there is an anti-rachitic factor in certain foods, but that in addition there must be a proper calcium-phosphorus ratio. The role of Vitamin D appears to be that of enabling the organism to make use of the calcium and phosphorus in the diet. It has been thought of as the calcium conserving vitamin, but from the latest studies it appears that it is, instead, a calcium-phosphate metabolizing agency. At any rate it seems to aid in the assimilation of these minerals, regulating their balance and determining their normal deposition in the bones. Experimental work has demonstrated that animals put on a rachitic-producing diet will not develop rickets. The next step was the discovery of the effect on exposure of a ricket-producing ration to ultra-violet ray. When pure protein or pure carbohydrates were thus exposed to ultra violet irradiation and fed to the animals they developed rickets, but nearly all fats so treated acquire anti-rachitic property. The conclusion that radiant energy activated some substance in the ration was obvious. Attempts at isolation of this substance resulted in the knowledge that it resisted saponification, hence the conclusion that D belonged to the sterols. As cholesterol was known to be the most common sterol in animal tissue, it was subjected to irradiation. The antirachitic substance was developed, but later chemical and spectroscopic studies demonstrated that it was not cholesterol, but another sterol, existing as an impurity of cholesterol, was the source of the anti-rachitic substance. Ergosterol is this sterol and Vitamin D, is the name given the anti-rachitic substance. It is fat-soluble and is derived from the unsaponifiable fraction of natural fats. Ergosterol is found in both animal and vegetable fats.

Evidences of Deficiency: Rickets is a rare disease in the tropics. Its relation to sunshine is evidenced by its higher incidence from November to April in temperate climates. The absence of sunshine in the Arctic zones is compensated by the consumption of large amounts of sea food and oil by the people of these regions. Hence, it happens that rickets is more prevalent in the temperate zones than elsewhere. It is not confined to the poor nor do breast-fed infants escape. That the smoke-laden atmosphere of cities absorbs much of the actinic rays of the sun and causes a higher incidence of rickets than is found in country children is axiomatic. It is probable that one half of both breast and artificially fed children spending most of their days indoors during the winter months have subacute evidences of rickets. These subacute cases are of importance, since they are the most difficult to detect. Few doctors would overlook the frank, well-developed case and no description of these is warranted here, but the child who has grown rapidly is often overlooked. A fickle appetite, a lack of usual energy, a failure to continue a normal weight gain, a developing torpor of the bowel, a subsiding mental activity evidenced by lower grades in school, a beginning flabbiness of the abdominal muscles, a few carious points in the teeth, and a moist pillow while sleeping, should arouse suspicion.

Sources of Supply: Cod liver oil is rich in Vitamin D. In fact, it has become the standard for comparison of D content in other sources. Other species of fish, e. g., halibut, have been found to furnish satisfactory amounts of the vitamin. Egg yolk, butter, cream, whole milk, yield a fair amount. The richest sources are ergot and yeast. The chief supply commercially comes from irradiated ergosterol called Viosterol, which is dispensed in a vegetable oil. This is about

one hundred thousand times as potent as a rachitic as is Cod liver oil. Some of these come in tablets, each of which furnishes as much as 500 units of Vitamin D. One teaspoonful of Cod liver oil daily should be adequate for a breast fed infant during the winter months. The use of neither would seem necessary during the summer months. Neither is it considered necessary to use ultra violet rays on children in this zone from April to November. All that is necessary during this period is exposure of the body to the sun's rays.

It is yet a moot question if adults need Vitamin D. The pregnant woman is excepted from this statement. That the pregnant woman so frequently suffers dental decay might be considered some proof that even adults may conserve their health by eating foods rich in D.

We have been led to believe that milk was a perfect food for so long a time that it rather jolts ones complacency to learn that even milk is not perfect. The image breakers have wrecked our popular heroes and now our foods must suffer likewise. Milk can now only be called our "most nearly perfect food." It has the necessary calcium and phosphorus, but not enough Vitamin D. The effort to add D to milk was a natural endeavor and now three methods are being employed, tentatively. The most promising of these methods seems to be the irradiation of milk by means of the ultra violet ray. By this method it is possible to increase the D potency some nine times. An exposure of only eight seconds is necessary. No material change in taste is noted and subsequent pasteurization does not seem to lessen its potency. A daily amount of 400 to 500 c. c. is effective in clearing up rachitic signs.

Feeding cows a yeast which has been activated by irradiation with the ultra violet ray is also now in use. This seems to vitaminize the milk and pasteurization, apparently, does not lessen the vitamin content. Several cities are now being supplied with this milk.

The third method consists in the addition of a cod liver oil concentrate. This concentrate is very potent, as only two drops will vitaminize milk to the extent accomplished by three teaspoonsful of cod liver oil. Such a milk has relieved children of rickets in some forty days.

Vitamin D is a highly potent substance and the need of the body is extraordinarily small, but there was no occasion for the daily press giving publicity to an alleged poisonous character.

There has been established a standard for dosage based on the term unit. The dosage sufficient to prevent rickets in an infant is established at one hundred and fifty units. A single gram of the pure vitamin would furnish fifty thousand million units. The process of manufacture is covered by the Steenboch patent issued to the Research Foundation of the University of Wisconsin and is supervised by the Committee on Foods of the A. M. A.

### Vitamin E.

Historical: Vitamin E has been ranking a place in literature on Vitamins since 1925, when Evans published his paper on the relation of sterility to malnutrition.

Chemical Nature: The chemical nature of Vitamin E is not known. It is highly resistant to heat, light and oxidation. It does not seem to be affected by any of the ordinary chemical reactions. It is referred to as fat-soluble, but its range of solubility is much greater than that of the ordinary fats.

Evidences of Deficiency: The most impressive phenomenon of Vitamin E deficiency is the death of the fetus and its absorption between the twelfth and twentieth day of pregnancy. The maternal portion of the placenta, however, continues to live for several days after absorption of the fetus. This appears to exclude placental injury as the cause of death. Experimentally, this same animal may then be put on a diet with an adequate supply of E and the succeeding pregnancy goes to term normally.

The vaginal smear method study was followed by Evans in studying the growth and rupture of the Graafian follicles.

Sources: Vitamin E is found in a variety of animal substances, but never highly concentrated. Muscle contains more than liver or kidney. Only a small amount is found in cream and none in cod liver oil. It is very abundant in the vegetable kingdom, particularly in leaves and seeds. The cereals carry large amounts; this is especially true of wheat embryo. An oil has been extracted so potent that one drop daily cured dietary sterility. This oil can be given orally, subcutaneously or intraperitoneally with equal effect. The vitamin is transferred to the fetus; this has been proved by curing dietary sterility by feeding the tissues of new-born rats to mothers suffering from the deficiency. It is stored in the tissues apparently and is not exhausted for some three months.

The male is affected by a diet deficient in E equally as the female. The end result is a destruction of the germ cells and, eventually, the seminiferous epithelium. Strangely, the ovary, as well as ovulation, are not impaired in the female.

There is no commercial product available. It appears to be widely distributed in nature and the amount necessary for body needs is so small that it may not bulk as large in therapy as the other vitamins.

### Vitamin G.
### ($B_3$ English Terminology).

Historical: Originally included under the name Vitamin B and recognized in English literature as $B_3$, it was suggested in 1926 by Sherman that it be given the name Vitamin G. Strangely, this was the initial letter of Joseph Goldberger, who found that there was a "substance" in autoclaved yeast that prevented pellagra, as well as cured it.

Chemical Nature: It is water-soluble and is highly resistant to heat.

Evidences of Deficiency: The symptomatology of pellagra, consisting of cutaneous, gastro-intestinal, nervous and mental disturbances are adequately known to the profession and detailed reference is not considered necessary here. The distinguishing skin features are pigmentation, keratosis and sharp delineation of the lesions. Parasthesias, hyperesthesias, actual pain, irritability, apathy, melancholia, hallucinations, delirium, are the more frequent nervous and mental symptoms, while a burning sensation of mouth, beety tongue, digestive upsets and progressive easy fatigue are outstanding symptoms.

Sources: This vitamin is found in milk, meat, turnip greens, tomatoes, green peas, spinach, mustard greens, kale and dried yeast in useful quantities. Pure dried yeast in one-half ounce amounts daily is an easy method of supplying a deficiency. It may be added to milk or tomato juice. Liver extracts are valuable sources of G, but their cost is deterrant. Lean meats should be given whenever the digestive symptoms permit. Milk should be used daily and the form is subject to great variation. Such foods as corn, wheat and rye breads, oatmeal, sweet potatoes, onions, carrots, syrup, fat pork, lard, butter, cotten-seed oil and gelatin are all poor sources of Vitamin G.

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**Displacement of Gastro-Intestinal Tract Following Phrenic Exeresis.**—Noack observed in a number of patients that phrenic exeresis on the left side is followed by severe gastro-intestinal disturbances, such as constipation, severe gas pains, a feeling of fulness while eating, nausea when an attempt is made to complete the meal, and frequent eructation and vomiting. He made roentgenologic studies of these patients and discovered that the paralyzed diaphragm causes considerable displacements in the gastro-intestinal tract. He points out that the disturbances caused thereby retard the healing process of the tuberculosis or make recovery impossible, because the deficient nutrition resulting from these disorders must have a deleterious effect on a destructive disease like tuberculosis, and thus the exeresis done to improve the tuberculosis may do more harm than good.

## THE HAZARD OF TRYING TO FORGET*

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In attempting a discussion of the title announced one might wonder why anybody would consider it a hazard to forget almost any experience he had undergone within the past three or four years, and yet upon reflection it is significant that very few of us have actually made attempts to forget our losses, both real and fancied, and for this reason the incidence of neuroses and psychoses has shown no material increase over that of an average era of prosperity. The old adage that misery loves company still holds true, and most people have not hesitated to talk out their troubles with each other, which has, in the long run, been a wholesome thing to do.

The so-called pleasure-pain principle of modern psychology is now pretty generally accepted by those who are interested in the interpretation of symptoms of many neurotic and psychotic manifestations, which briefly expressed for practical purposes means that all of us, either consciously or unconsciously, endeavor to seek that which is pleasurable and avoid that which is painful. In our effort to escape the painful, however, we are particularly careful to not give expression to emotional reactions which would provoke the criticism of our acquaintances, be they intimate or remote, or that of the community at large. In other words, we seek to exercise such censorship as will meet the requirements of our herd instinct. For this reason many painful experiences are at once relegated to the realm of the unconscious and soon forgotten. Here they are deposited along with a host of other experiences of little consequence, having little or no emotional coloring, and of no value to the individual.

While we do not subscribe, one hundred per cent, to the teachings of the Freudian school of psychology, we do not hesitate to admit that we are indebted to much of its philosophy for our present day conception of the unconscious, and a better understanding of many heretofore unexplained mental mechanisms. At this point let us briefly review what is meant by the psychiatrist when he refers to the unconscious. "It is not a static thing located somewhere in the brain, or somewhere under consciousness, as the commonly used term subconscious would lead us to infer. It is an assumption or an hypothesis, not yet proven, and its workings are but a means of explanation, or interpretation of more obvious actions known as conduct."

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*Read before the Louisville Medico-Chirurgical Society,

We have already referred to the herd instinct, or group attachment, which is a tendency originating from the unconscious, but one dating back beyond the individual's own past. Another example is that of the new born babe which instinctively takes to suckling, certainly through no past experience of its own, and yet without conscious awareness of its action or the underlying motives. Our unconscious, therefore, is a part of our total personality which has been built up and organized in the process of development. The unconscious, then, becomes our historical past, not the past only of the individual, but of the race as well.

It has been compared to the iceberg, nine-tenths of which is below the surface of the water. The one-tenth above, which we can recognize, appears to move with the wind. If we watch for a time, however, we may see this berg move directly opposite the wind currents, the sea currents acting upon its submerged but larger portion. So with the unconscious, the much larger portion of the psyche produces effects at the surface which cannot be understood, unless we assume this unseen force, the motivating cause.

While many of the symptoms of the psychoneuroses, such as hysteria, neurasthenia and psychoasthenia, and some of those of the more outspoken psychoses, can be explained upon the basis of emotional conflict, or complex formation, occurring in infancy or early childhood, yet in a pure neurosis such as that of the anxiety type, or in some of the benign psychoses of the manic-depressive group, it is often evident that the complex formation is of much more recent origin. For this reason it is, in many instances, not difficult for the trained observer with a satisfactory clinical experience in psychiatry to interpret the symptoms of these latter conditions and many of those of hysteria without a highly specialized and technical training in psychoanalysis, as some of the proponents of the speculative philosophy would have us believe. We are willing to concede, however, that many of the cases coming under the heading of psychoasthenia, especially the obsessive or compulsion neuroses, can best be interpreted and best handled from the stand point of psychoanalysis. The same may be said of many cases of hysteria but of the latter there are quite a number whose symptom complex can usually be understood by a relatively short investigation of the patient's life history and the economic, social and domestic situations which the patient has been obliged to face, and from which he, or she, has endeavored to withdraw by various forms of escape mechanism.

Heredity, constitutional predisposition and precipitating circumstances all play an important part in the production of symptoms of the psychoses and neuroses, as well as in the psychoneuroses, and one should not lose sight of these factors in any sort of investigation that may be undertaken. One has become conditioned, so to speak, not only by his hereditary background, but especially by his constitutional predisposition toward the development of a given type of personality makeup, and will develop a particular type of neurosis or psychosis more readily than an individual of different personality under similar precipitating circumstances. Whether the individual be of the introvertive or extrovertive type, for instance, will have much to do with the character of symptoms when once released.

Kretschmer, a German author, has not only written much regarding the types of constitution, such as the pyknic, asthenic, athletic, dysplastic, etc., and the kinds of psychoses towards which these various types are predisposed, but he has also given valuable information regarding the psychoneuroses. In his discussion of hysteria he refers to three outstanding types, one characterized by violent motor outbursts, another by exaggerated emotional responses and a third, by the death sham reaction. The prototypes of the latter are observed even in fishes and lower animals. A certain type of small fish of the sea will float on its side, as if dead, when a dangerous type of fish approaches and we are all familiar with the behavior of the o'possum when confronted by imminent or even suspected danger.

The reactions just related, occurring in both human beings and lower animals, as well as in still lower forms of life, are only a few examples of defense reactions, or escape mechanisms, which many of us have observed in much more elaborate form in many of our patients who have enlisted our increasing interest since we have learned to understand them better, and are less inclined to dismiss them with a pseudo diagnosis of being only neurotic without any organic disease.

One might ask what has all of this to do with the hazard of trying to forget, and if forgetting painful experiences and unhappy situations gives one at least temporary mental composure why not put a premium on this form of escape mechanism rather than consider it a hazard. We shall agree at once that no harm can come from forgetting many painful experiences provided the individual, at the time of, or immediately after, such experiences shall have given adequate emotional expression, or has definitely admitted to himself that he has been greatly perturbed. Too many however, have been taught that they must be brave or exercise great fortitude in these emotional crises, and by this very effort

have clamped down what would have been a perfectly normal emotional outlet, and by this effort have, so to speak, forgotten, but actually crowded down into the unconscious a constellation of ideas surcharged with such emotional content that it may, for a time, lead an existence more or less independent of consciousness, but constantly craves for expression, and if the censorship of the individual becomes lowered by physical disease or fatigue, the conflict may assert itself in the form of a neurosis or even a psychosis.

It has been stated by some authorities that, in such instances, if an unhappy or painful situation has been only partially forgotten a neurosis may develop, and that the individual, by his symptoms, has achieved a temporary gain through illness in that much of his unconscious emotional conflict has been released. Following up this same hypothesis, it is further claimed that if similar unhappy and painful situations are completely forgotten, a psychosis may develop, and that many of the distressing symptoms incident thereto are essentially an escape mechanism and part of the process of getting well, or being relieved of emotional conflict.

As an example of the former, we may cite an individual, age 42, of good hereditary background, who, in more prosperous times, had made investments which he believed to be secure, but in time realized that his judgment had not been sound. Not willing to admit this to himself, much less to his friends in those days, he tries to forget it, as he thinks any hard headed business man should do, and which he believes the herd would have him do. He earnestly devotes his attention to other matters, and for the time being, does put the matter out of his mind, as he would say, but actually puts it deeper into the mind, or the unconscious. Pretty soon he notices that he has developed a sense of fatigue and that his pulse rate is rapid. He is conscious of some pounding about his heart, and notices a pulsation in the large blood vessels about the neck, which he had not heretofore observed. He consults his physician, an excellent internist, who gives him a thorough physical examination, carrying out all customary laboratory procedures in a painstaking way, all of which including the physical examination are entirely negative for any evidence of organic disease. In spite of all this and the assurance of his physician he, as you may have suspected, believes that he has some serious heart disease and asks for a consultation by a heart specialist. The latter is obtained and after going over the original case record carefully, he repeats an electrocardiogram which may have already been made by the internist and gives his assurance that there is no organic disease of the heart or blood vessels, not even an essential hypertension. Both physicians now with redoubled energy try to explain that the tachycardia is entirely functional and most probably of nervous origin. The patient denies that he has ever been nervous and in fact does not appear to be of the neurotic type, but finally consents to have a neurological and psychiatric examination. The family and personal history of the patient which had been carefully taken by the internist is now reviewed, and there is no indication of any recent business losses, although the patient had admitted that he had worked very hard and had been occupied by many pressing business matters during the preceding months, but had failed to recall the one important thing which he had almost forced himself to forget, and which was the cause of all his symptoms.

By his very effort to forget his original worry he had unconsciously had a flight from reality in the development of an anxiety neurosis which had manifested itself in the form of a functional tachycardia. Here was a form of escape mechanism which gave the individual a temporary gain through illness, although he might have saved much time and expense if he had faced his problem more frankly in the beginning.

Another individual, age 45, of clyclothymic makeup in whose family history there had appeared a definite tendency toward the development of manic-depressive psychoses, had not had any serious physical illness in childhood, or early adult life; had stood at the head of his class in school; was essentially of the extrovertive type and had a host of friends; had at age 34 a short period of depression following a period of more than average mental stress which was diagnosed as neurasthenia, from which he made a prompt recovery after a vacation of only a few weeks. Following this attack, however, in spite of the fact that he had been increasingly successful in business he had noted that he was more inclined to be either "up or down" in his emotional level than he had heretofore been, and although happily married there had been no children and he was inclined to place the blame for this on his wife who was of the pituitary type of constitutional makeup and perhaps not as highly endowed sexually as himself.

In one of his depressive moods, after having read some unorthodox literature concerning the importance of a happy sexual life, he reached the conclusion that a recurring sense of fatigue which he had noted recently, was most probably due to an ungratified sexual outlet and had the temerity to discuss the

matter with his wife who was none too sympathetic with his proposal that a man, under such circumstances, should be permitted to seek such gratification outside the bonds of wedlock. In other words he had become, somewhat too late, an advocate of experimental marriage, and although it soon became evident that this impractical proposal was only an expression of a symptomatic erotocism, and evidence that his judgment was already impaired, he realized that he had very seriously offended his wife. For a time he tried to justify his position upon purely philosophical grounds, but realizing that this was of no avail he was at first impatient and irritable, but soon became apologetic, and began to talk of joining the church and the Masonic order. At this point he had been put to bed, at his home, in charge of a nurse, after not having slept well for a period of several days. He was inclined to be affectionate with the nurse, but not in an offensive way, and was continuously quoting to her, and others of his household, numerous passages of scripture with which he displayed a surprising familiarity.

There soon developed a rapid flight of ideas with the tendency to boisterousness, and it was only by the greatest difficulty that the patient could be induced to take even a minimum amount of food and fluids. The conversation became incoherent and all interest in his immediate environment rapidly disappeared. He was transferred to a local sanatorium without resistance, where he had to be tube fed for a number of weeks. There was an inevitable loss of weight and strength on account of the extreme psychomotor restlessness, and a disorintation for time and place developed, although the patient always knew his doctors and nurses, and members of his family when permitted to see him. With the above exceptions consciousness remained remarkably clear throughout the course of the illness which lasted for many weeks but there was nothing in the incoherent conversation of the patient that could be recognized as having any relation to his original state of emotional conflict. As he gradually became more rational with a corresponding gain in weight and strength, he expressed an affectionate interest in the whereabouts and welfare of his wife and began to ask questions about his affairs at the office, concerning which he could not be made to take even a momentary interest, during the active stage of exaltation and incoherence.

Without going into further details we can see in this case the very definite tendency toward defense mechanism, in the early stages, when there was an unconscious flight from reality to an interest in the church or lodge, and finally an escape mechanism in the development of a typical manic phase of manic-depressive psychosis during the course of which the individual was oblivious to, and had completely forgotten all of the circumstances in connection with the offense which he had given his wife.

Here is another example of the dynamic force of the unconscious in an endeavor to effect a temporary gain through illness, but much time and considerable money was spent, much of both of which might have been saved if the patient could have been told, early, that his abnormal sexual craving was only a symptom of impending danger, and could have recognized it as such.

Time will not permit that we undertake a detailed discussion of cases of hysteria of the conversion type, in which the development of physical symptoms is no more than perverted expression of emotional conflicts which have been buried in the unconscious, and which represent various forms of escape mechanism temporarily satisfactory to the censorship of the individual who is trying to forget an unhappy situation.

As examples of these we shall mention only a few, such as hysterical amblyopia in an individual who does not want to see his family or friends who remind him of a situation he is trying to forget, he therefore unconsciously becomes blind; another who is unwilling to hear that which would cause him much pain, or a perturbed emotion which he is trying to suppress, suddenly becomes deaf; still another who is confronted with an intolerable situation which "makes him sick" develops an hysterical nausea; another who has for some time realized that a group of circumstances has gradually developed which has forced him into an embarrassing predicament from which there is no escape, but which he tries to forget, suddenly decides that he can "stand it" no longer, and unconsciously develops an astasia abasia, or hysterical paraglegia; yet another who is greatly perturbed over a situation from which there appears to be no conscious avenue of escape is suddenly stricken by a generalized convulsion, with a complete loss of consciousness, almost typical of grand mal epilepsy, and yet different in some of its essential characteristics, following which flight from reality there may ensue a temporary emotional readjustment.

And thus one might multiply such examples of escape mechanism which are all unconscious responses to submerged emotional conflicts that have been created by the individual who is trying to forget unhappy or painful situations, and while some of the symptoms of the psychoses or neuroses, thus produced, might be explained on the basis of the sexual libido, when interpreted in its broadest sense,

we doubt, for practical purposes, that any such rigid interpretation is either expedient or necessary in the type of cases to which we have alluded. We believe that it is sufficient to say that all can be explained on the basis of the pleasure-pain principle, to which brief reference was made in the early part of our paper.

Even a brief discussion of the methods of treatment of all types of cases, essentially dependent upon emotional conflict, would be manifestly out of place at this time and would require a paper much longer than this one. We shall, therefore, be content if our assumption that there is a hazard in trying to forget has been proven, and leave it to others to elaborate upon the hints which were given in referring to some of the cases which we have cited.

Before closing, however, a few observations regarding general principles of treatment might be of some interest. Even in the most clearly outstanding type of case of emotional conflict, the writer would have you know that he is fully conscious of the importance of a thorough physical examination, including all necessary laboratory procedures, in addition to a complete family and personal history, all of which will increase the confidence of the patient. During the taking of the latter, much of the personality makeup of the individual will be unfolded, as well as many important symptoms which will act as a guide to the method of treatment, and it should be in much more detail than is ordinarily required in the average medical or surgical case.

Too much importance should not be attached to hereditary tendencies, especially in the presence of the patient, inasmuch as most of us have an heredity which is not the best, and yet, perhaps, is not the worst. It should be borne in mind that, while positive neuropathic and psychopathic tendencies in the family history should be given their proper value, it is becoming increasingly evident that environmental factors and precipitating circumstances play a much more prominent part in the production of both the neuroses and the psychoses than was formerly believed.

By the same token that a well recognized hereditary tendency to the development of tuberculosis may even be a protection to an individual, by the avoidance of many of the exciting causes, and give him a better chance of good health than would obtain in another individual without any such tendencies, so in the case of one with a known familial tendency to emotional instability, the very recognition of such fact by the individual may be a source of protection to him, in that, under proper guidance, he may be taught to meet situations more frankly, and make better adjustments to reality than one who has not had such instruction or advice. The body type of constitution should always be taken into consideration, inasmuch as some of the types give one a lead as to the personality pattern which is most likely to be encountered, and a familiarity with this phase of constitutional predisposition may be of value, not only in the proper handling of the case, but especially in the matter of prognosis.

Following this, especially in the anxiety neurosis, and in most cases of hysteria, there should be, at least, a practical analysis of all life situations which have led up to the development of the symptoms, and if the precipitating circumstance can be elicited, it should be placed squarely before the patient, who should be encouraged to practice such introspection as will enable him to recognize the causal relationship of the particular situation from which he has, unconsciously, endeavored to escape. When this is accomplished by whatever method may be employed, and it is by no means an easy matter, in every case, to determine which one of several situations is the most important, the patient should then be told, in a very positive but kindly sort of way, that he must face the situation more frankly, and give such normal emotional outlet to it as the circumstances in the beginning might have justified.

In other words, he must acquire a different mental attitude regarding the conflict to which he has reacted in an unwholesome way, and be taught to face reality, accepting it as such, and make an earnest effort to adequately adjust himself thereto, as a normal well integrated person would do, and as he himself might have done, if he had had the proper guidance at the onset of his emotional crisis.

Conclusions:

1. Too much effort to forget an unhappy emotional experience may produce many neurotic symptoms, or even precipitate a psychosis.

2. A prolonged psycho-analytic study is not necessary, in the vast majority of instances, to understand the underlying emotional conflicts, but some practical analysis of the total situation should be made.

3. Heredity, constitutional predisposition and precipitating circumstances all play a part, but the importance of a thorough physical examination should not be overlooked.

4. Some explanation should be given the patient of the unconscious mental mechanisms which are responsible for his symptoms.

5. Psychotherapy, in some form, is an indispensable part of the armamentarium of the present day neurologist and psychiatrist, especially in the treatment of the neuroses, and we doubt that, in the light of our present

knowledge, we are often justified in telling our patients to try to forget their worries until we are satisfied that they have given adequate emotional expression thereto, or have some understanding of the underlying mechanism of their inner conflicts.

## DISCUSSION

**Louis Frank:** It would seem to me that conditions such as Dr. Gardner describes are primarily the result of civilization. There has been a great deal of discussion, pro and con, with respect to the Freudian theory but, after all, I am inclined to believe that it embodies more truth than it is commonly credited with. In other words, regarding man as an animal, he is put here for one purpose and if he lives the normal life of a healthy animal he merely follows the dictates of his desires. When he does this we look upon him as abnormal, forgetting both as doctors and as members of society, that his reversion to animal characteristics may be due to an instinctive desire to escape the restrictions that have been placed upon him by civilization.We interpret many of these manifestations as abnormal simply because they do not conform to the social standards that we have set up for ourselves.

I am wondering just what distinction Dr. Gardner makes between the terms sub-conscious and unconscious. I am under the impression that psychiatrists now consider these terms practically synonymous. My own opinion, however, is that there is a real distinction between the sub-conscious and the unconscious. As Dr. Gardner has pointed out, the instinctive suckling of the mother's breast by a newborn infant is an example of the unconscious. That is a natural or instinctive act. On the other hand, our sub-conscious is based upon experiences we have had, either mental or physical, rather than upon instinct. It is sometimes very difficult to draw a line of distinction between experiences that are mental and those which are purely physical. Dr. Gardner spoke of pleasure and pain. Pain is a physical reaction while pleasure is a mental emotion, yet all physical reactions create certain mental emotions. Sadists experience pleasurable emotions by the infliction of pain. We say the odor of a flower gives us a pleasurable emotion. There are certain painful physical reactions that are pleasurable.

Many of these manifestations are the result of man-made rules and restrictions and it is a very difficult matter to draw a line between the normal and the abnormal. We cannot measure one individual against another. What we do and how we act is largely determined by our environment and social contacts that have been built up during the course of our lives, and that make it impossible to draw an arbitrary line and say that upon one side lies abnormality and on the other side normalcy.

I am inclined to believe that this subject, like religion, belongs largely in the field of speculative philosophy and must be evaluated in the light of individual experience.

**Gavin Fulton:** When I see a patient of the type described by Dr. Gardner, I am inclined to believe that the manifestations are not so much a defense mechanism as an alibi, which is an entirely different proposition. I would like to hear Dr. Gardner's opinion as to this distinction.

**Wallace Frank:** During the past four or five years we have seen an increasing number of individuals, chiefly women, who complain of all sorts of vague pains in the abdomen. Dr. Gardner referred to the sex complex in the male, but it has been my observation that sex is an important factor in the lives of these females, and I have often wondered whether these vague abdominal symptoms of which they complain are manifestations of a defense mechanism against the normal sexual desires of the husband, or whether they are reflex and intended as an appeal to his sympathy. I am convinced that in ninety-five per cent of such cases the trouble has its origin in the sexual relationship. They complain of all kinds of abdominal symptoms but upon going over them very carefully we rarely find any physical trouble except a spastic colon, which I think is largely a mental manifestation. I would like to hear Dr. Gardner's opinion as to whether or not these symptoms are based upon one of the two primary instincts—self-preservation and reproduction.

**Emmet F. Horine:** Tachycardia may be encountered occasionally in cases as described by the essayist, there being present a neuro-circulatory asthenia. Probably an unstable nervous mechanism must be present. This with any recent infection or focus of infection initiating a tachycardia results in a definite phobia of heart disease. Fear of the heart leads to a reduction in physical activity and resulting muscular flabbiness. At this stage exercise provokes greater consciousness of the heart beat and thus a vicious circle arises. With reassurance, a most careful explanation of the whole situation to the patient and a graduated amount of exercise regularly followed, recovery ultimately ensues. A certain number of the more unstable individuals fail to recover completely.

**J. Garland Sherrill:** I would like to ask Dr. Gardner how one can tell, in a case of the type he describes, when the patient is really on the road to recovery. In many instances these manifestations constitute an escape mechanism, not so much from the rules laid down by society as from the rules which the individual has set up to govern his own behavior. He condemns himself, goes into a shell, so to speak, and stays there until he becomes morbid. However, these patients do recover and what I would like to know is, how can we recognize when it occurs and when the patient should be allowed to resume his usual duties.

**W. E. Gardner,** (in closing): I wish to thank the members for their discussion of the paper.

As to hysterical asthenia, there are many instances where an individual develops physical symptoms of various kinds as a result of some mental conflict; it is simply an escape mechanism which satisfies his censorship. An unhappy situation presents itself in the individual's life and he tries to be brave and adapt himself to it without worrying his friends. Consequently he suppresses that mental reaction and then develops an escape mechanism in the form of some physical symptoms that satisfies his self-esteem by giving him a reasonable excuse to be unwell. Thus his mental conflict is converted into a physical symptom. If he would frankly acknowledge the situation and face it, there would be no such conversion.

Dr. Price referred to a man past fifty, who developed a form of depression that we call involutional melancholia. In women this condition usually develops around the menopause. A condition of this type will sometimes continue for four or five years and then recover, but the majority of them do not get well. This man had no physical disease; his trouble was purely functional. He went to an institution where he received the usual routine of physical rest, occupation, exercises, etc. During that acute psychosis he probably forgot many unhappy situations which came out in the form of various physical symptoms. He had a flight from reality, beginning with a complete breakdown and relieving him possibly of a neurosis for the rest of his life. Many of these patients will get well if kept in the hospital long enough. That is one mistake that is frequently made. Our public institutions are so crowded that as soon as an individual begins to show some improvement he is dismissed to make room for a new case. Having barely reached the stage of convalescence he goes back to his old environment and the result is a relapse.

As to the distinction between subconscious and unconscious. By subconscious we mean those things we do more or less involuntarily or semi-consciously and which by the exercise of our will-power we can call back into the conscious. For example, while reading my paper I may have been pushing this chair around, which act, while more or less subconscious, could readily be called into the field of the conscious. The unconscious is a different thing. It is made up of past experiences which have been pushed down beneath subconscious and forgotten about; they are entirely out of consciousness, but the emotions associated with these experiences are constantly craving expression and the censorship exercised by the individual gives rise to a conflict which finds its outlet in the development of physical symptoms. So, for technical purposes at least, there is a very clear distinction between the subconscious and the unconscious.

I agree with Dr. Frank that it is very difficult to draw a line between what is normal and what is abnormal. We all have a mixture of the normal and the abnormal. An individual is considered normal when he adapts himself reasonably well to his environment, but it is impossible to draw a hard and fast line and to say that one man is more normal than another There are as many distinctions as there are individuals. The only criterion we have to go by is how well a man gets along in his community and adapts himself to the people with whom he comes in contact.

Dr. Sherrill's question as to when it is safe to release one of these individuals from an institution or to give a favorable prognosis, is a difficult one to decide. Among the first criteria of a return to normal is the individual's willingness to admit to himself that he has been abnormal mentally. In other words, it is not safe to let him go until he has developed insight. When he recognizes that he has been abnormal mentally then he is approaching recovery mentally. When the individual has developed insight it is reasonably safe to let him go.

As to Dr. Wallace Frank's remarks, assuming that spastic colitis may be organic in some individuals, in others it is often a conversion symptom. The individual is confronted with some unhappy situation and proceeds to develop a feeling of nausea or some digestive disturbance, his attention is centered upon the digestive tract and he develops symptoms of colitis purely as an escape mechanism. He will not acknowledge his unhappy situation and face it frankly. The symptoms are the equivalent of "weeping through the bowels,"so to speak.

Freud has given us a formula that has been of great help in interpreting psychotic manifestations. The greatest normal instinct is self-preservation and the next is reproduction. Sexual libido in its broadest sense means the desire to reproduce. An individual who does not have adequate physical outlet for his sexual desire sometimes sublimates it in his work, in his profession or in art—painting, music, etc. He has the creative instinct and if it be not satisfied by creating offspring then he will create something else.

Dr. Horine spoke of neuro-circulatory asthenia. That is what we see clinically and prescribe for, but the majority of such individuals need something more than exercise and routine. Such an one may be relieved by talking to him and perhaps digging up some unhappy situation which has been worrying him and has precipitated the heart condition. The physical symptoms satisfy his self-esteem and he makes a temporary gain through illness which gives him a rest from his emotional conflict. In such a case it is not always advisable to convince the individual that he has no heart disease It is

better sometimes to let his mind concentrate on his heart, thus gaining relief from his emotional unhappiness.

There is a difference between sleeplessness and insomnia. An individual is sleepless when disturbed by indigestion, or by noises or other things which keep him awake. When he begins to worry about his sleeplessness and gets the obsession that he is never going to sleep, it becomes a neurosis and then it is insomnia. Such an insomnia, however, in the absence of organic disease is usually secondary to some unconscious emotional conflict.

## A GLIMPSE OF PRIMITIVE MEDICAL MEN AND EARLY MEDICINE*

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Among the most primitive races that inhabited the earth of which we have any record there was to be found among them some person or persons to whom the rest of the tribes looked in time of distress, danger or sickness. These individuals were supposed to possess some unusual powers which could at will be used for good or evil. They could change the seasons, bring success to the chase or war, also an abundant harvest and last but not least they were supposed to relieve sickness or prevent death, or cause the same in their enemies. Being thus endowed with this unusual power the primitive medicine-man was looked upon as a mediator between the unseen powers that actuate the universe and the visible people of the earth. It appears that this office was not one that could be filled by any member of the tribe, but that certain individuals were selected because of their supposed fitness and that this office was passed on to their successors after special training. Thus, among the early Indians there existed a medical society called the Mide the admission to which was guarded with the utmost jealousy.

A survey of the medical customs of the primitive people of the earth shows that a definite and distinct caste of medicine-man existed.

Heredity was one of the necessary qualifications for becoming a medicine-man, while among other early tribes, the reputation of being a healer was dependent on some charm, manner, or unusual incident connected with the individual. Many absurd and unusual reasons are reported which at times have led a community to look upon some one of its members as a healer or medicine-man; for instance, a person who fell from a great height and who escaped unhurt; in Liberia, twins are especially adapted for the office of medicine-man; also the seventh son of a seventh son. The medicine-man of Siberia claims to hold intercourse with invisible powers and with the souls of the dead and works himself into a high state of frenzy, foaming at the mouth, twitching and writhing in convulsive movements, hence as we would expect those with a tendency to convulsions were naturally preferred as the neophytes of the order. Many such examples as the above could be enumerated to show that the effectiveness of the primitive medicine-man depended largely upon his supposed miraculous gifts, mysticism, sorcery, charms, or incantations. There cannot be the slightest doubt that medicine had its origin in magic or mysticism, and for many centuries, almost to the present day, magic has never completely lost its hold on medicine. The intimate connection between medicine, magic and religion is clearly shown by the fact that the first magicians of whom we have any record were priests, and throughout Egyptian history many of the functions of the priesthood were magical in character. In addition to his religious duties, he was called upon to perform prodigies or wonder worker for the amusement of the King and his court, and in illness his help was invariably sought.

It is in the latter capacity that the healer or medical magician concerns us, we know how he operated for nearly all the medical and magical papyrus found in Egypt have set forth his methods. In these papyrus disease and illness, are treated as if personified and so addressed. The simplest method of treatment was the recitation of a spell in which the demon was bidden to be gone, or the poison to leave the patient's body. Such spells were unusually full of references to the Gods and the defeat of the demon of disease, was usually attributed to divine power.

All these early races regarded the prevalence of disease and especially of important epidemics, as punishments inflicted by their Deity on account of their sins. Consequently for their relief, they resorted to repentance, prayer and the interposition of their priests officiating in their places of worship, rather than to the administration of medicines, this combination of the functions of priest and physician in the same person, while at this early date was common to all, was even more pronounced in the Jewish race than Egyptians or Assyrians. Among the early Egyptians one finds evidence of an attempt to separate natural from supernatural medicine, and while these efforts were feeble in their beginning and not well understood, they

*Read before the Fayette County Medical Society.

served as an impetus at a later date to rid to a certain extent natural medicine from most of the magic and superstition that so tenaciously clung to it for centuries.

The status of medicine and the physician in ancient Egypt has been a subject of much interest and discussion both in ancient and in modern times. During these long ages there were many fluctuations in national culture in response to the character and ability of the individual monarchs. During the ups and downs of the physician and the art of medicine at this period one would naturally suppose they must have undergone many vicissitudes, but it appears that in medicine as in religion Egypt was intensely conservative, for as Herodotus said the Egyptians "keep the ordinances of their fathers and add none others to them." Nevertheless, Egyptian medicine as depicted in the Ebers papyrus, reached a level of development much superior to that of its predecessors, there must have been innovators at work at some period or another in Egyptian history.

The discovery of the Ebers papyrus in 1872 and translated in 1890 and other documents have unlocked a vast amount of knowledge concerning early Egyptian physicians and medicine.

The Egyptians and Babylonians were among the earliest cultivators of the medical art and inscribed their knowledge on papyri, many of which have been translated and show that their medicine was in the hands of the priests who kept their knowledge in their own craft, also that, at that time there were specialists who treated the eye, the ear, the teeth, and all other parts of the body. The healing knowledge of these physicians not only comprised religious incantations etc., but a thorough knowledge of astrology and occult lore, as well as an herbal science, which related to the treating of disease.

A word as to Astrology, it is based upon a combination of natural observation and mimetic magic, and its influences upon medical thought and practice, dating from the earliest times remained in active operation for thousands of years. The primitive medical-men and less ancient doctors were not content with pressing into their service, under the whip of sympathy, all sorts and conditions of natural substances in the animal, vegetable, and mineral kingdoms, but lifting their eyes into the heavens and observing the ever changing conditions of the sun, moon, and stars they connected those varying phenomena with their own lives, and saw in the ups and downs of celestial events a reflex of the vicissitudes of human fortune.

The priests understood the art, both, on the theugric and the medical side, and while employing the resources at their command, they taught the convalescing patients to believe their cure to have been wrought by the divine operation itself.

The descriptions available as to the customs and practices at the Egyptian temples show a close resemblance to those of the Greeks. We are told from magical rituals in their temples that charms and incantations had to be recited with the most punctilious accuracy not only of word, but even of intonation, otherwise the relief sought would not be obtained. The temple practice with its priest-physicians endured for several thousand years, and in spite of the slavish adherence to traditional teaching, their medical learning and skill is by no means to be despised, as venesection, circumcision, and even operations of more magnitude were practiced. Herodotus says the treatment was so stereotyped by law that in case of the death of the patient, the physician was liable to capital punishment, unless, he could prove he had not departed from the accepted treatment of the time. The temples were organized places of learning like the European monasteries of the middle ages, with all the practices, which to us at this late day seem queer, we can not deny that our own medical art owes a deep debt of gratitude to these priest-physicians and to the organizations they founded and preserved through so many centuries.

The state of medicine in China was until recent times wholly stationary. There existed a very involved lore of the pulse, an extensive but inaccurate materia medica and a most abiding faith in the efficacy of acupuncture, these were conspicuous features of their medical system. Their anatomy and physiology were wholly fantastic. This lack of progress was also true of medicine of ancient India, which, however attained at a later date remarkable skill in surgery, with well written treatises on infant nutrition and other branches of medicine.

The Greeks were skilled physicians and were divided into two classes, the physician and assistant. Whether the assistants were free men or slaves, presumably the latter, is not known. We do know however, that they acquired considerable knowledge of their profession empirically from obeying their masters' orders under whose direction they worked and observed their methods. The slave-doctors were employed to do the most unattractive part of the work. They waited upon callers at the dispensaries or went from house to house to prescribe for the domestics. "A physician of this class," Plato remarks, "never talks to his patients or lets them talk about their complaints; he prescribes as he sees fit as though he knew every-

thing about the case, gives orders after the manner of a tyrant and then hurries on to the next patient. On the other hand, the physician being free-born, of course, discourses with a free-born patient." The Greek physicians were of a higher order than any of their predecessors, and because of their superior ability and knowledge they were looked upon with bitter prejudice, especially by the Romans. The degraded condition of medicine in the Roman Empire prior to the conquest of Greece, could not long stand against pressure of the more enlightened philosophy and medicine of the Greeks, as was evidenced by the great influx of men educated at Alexandria, which soon caused their services to be required, not only, with their Armies, but at the Courts and households of the successive Emperors. The Greek physician in Rome was for a long time denied certain rights enjoyed by the Roman physicians, they were finally permitted to enjoy all the rights of citizenship, and during the reign of Antonius Pius, in the last half of the fourth century, A. D., they were granted many special privileges. The physician to the King or Emperor was called "the Royal Healer," by virtue of the power invested in him, he appointed other physicians as healers throughout the Empire whose duty it was to attend the poor, and perform any of the duties at present assigned to public health officers. These were paid a small sum from the public treasure.

Notwithstanding this partial organization of the better educated members of the profession and fair recognition of their social standing in the Roman Empire, medical practice remained to a considerable extent in the hands of the more ignorant and superstitious part of the population. The rapid decline and closure of the chief resorts, for the sick and centers for medical instruction, following the edict of Constantine against them in 335 A. D., made it necessary to provide substitutes both for the care of the sick and for the preservation and increase of medical knowledge.

The monasteries under the control of monks and priests became the most ready substitutes, especially as healing of the sick and help for the poor were inculcated as cardinal duties of the Christian life. And as healing of the sick and restoring the dead to life were resorted to by the author of Christianity and his immediate disciples as evidence of the truth of their doctrine and their divine origin, it exerted great influence in tightening the bonds between medicine and religious institutions under the control of the priesthood. The same influence created in the minds of the female converts to Christianity great zeal in prosecuting charitable enterprises of various kinds. Consequently, while the Emperor Constantine was busy closing all medical institutions under what was called pagan control or Greco-Roman Philosophy that recognized the worship of many Gods, his mother Helena, was devoting much of her time and means to the founding of a genuine hospital for the sick and poor in Jerusalem. Other hospitals had been established at a much earlier date, but their efficiency was impaired by lack of funds and incompetency of those in charge. Such then was the beginning of the modern system of hospitals, asylums, and dispensaries for the sick and helpless that are today to be found throughout all Christiandom. The founding of these institutions also led to the appointment of some person to prepare and dispense the medicines ordered by the physicians. This was doubtless one of the chief influences creating the order of pharmacists, or apothecaries as distinct from that of the physician.

By this time one can see a faint glimmer of dawn had begun to illumine the long mediaeval night, the gloom of which had lasted for several hundred years when the University of Cordova reached the height of its influence, and Salerno, a town near Naples, began to assume form and importance as a centre of study. Quickly following upon these stimuli came the first, or Arabo-Scholastic revival of learning, and the Emperor Frederick II revived dissection by ordering the dissection of a human body every five years. That broke the spell, and henceforth the progress of medicine did proceed with amazing rapidity.

The foregoing is a short resume of the rise of the primitive medicine-man and the progress of medicine. Beginning as a member of an obscure and despised section of savage medicine-men, he slowly rises in importance along with his calling, linked for many centuries more or less intimately with the religious practitioner, sometimes entirely hidden behind the wearer of the priestly robes, sometimes indeed wearing them himself, sometimes ignominiously stripped of such imposing habiliments and thrust from the temple precincts, but nevertheless gradually, though by fits and starts and with many set-backs, attaining to the dignity of an independent class in the community, dealing as a scientist frankly and admittedly with natural fact. But although today proud of the eminence to which he has attained and the success which has crowned his endeavors, and looking forward with confidence to still greater achievement in the future, he must still be prepared to hear his claims challenged by the mystic, pretentious and deceptive for the mental makeup of mankind is such that it is easily led aside from the straight and nar-

row path of scientific investigation with its need for painstaking accuracy and secular patience, to the broad road of faith-healing and miraculous diagnosis and treatment. Out of the welter of the confused and chequered history of our calling, yet another fact emerges, slowly, yet enduringly, namely that knowledge which is based upon scientific method, though it may often be submerged and from time to time lost sight of, is nevertheless ultimately indestructible, for the simple reason that it is true.

## INTRAVENOUS UROGRAPHY*

J. N. Townsend, M. D.

Owsley Grant, M. D.

Louisville.

The time has come when we believe sufficient work has been done so that intravenous urography can be assigned to its proper position in the urological diagnostic scheme. During the short time this proeedure has been in use, few branches of medicine have failed to use it, but with only uncertain results. At the present time, roentgenologists, internists and others, are realizing that intravenous urography must be used as a supplementary agent along with the older methods of diagnosis—namely, cystoscopy, pyelography, pyeloscopy, cystography, and the various laboratory tests. This procedure has proven of such value in the past year, that we feel that if we were forced to choose between it and pyelography, we would most certainly choose the intravenous method.

It is hardly necessary to discuss the historical developments of this proeedure in a paper of this type, but rather to attempt to evaluate intravenous urography in the urological sub-divisions and to describe a technic for obtaining satisfactory roentgenograms.

The advantages of intravenous urography over retrograde pyelography are as follows:

First, the comfort of the patient is of prime importanee. Seeondly, it makes it unneeessary to introduce a foreign body suèh as a catheter or pyelographie media up the ureter into the kidney, which often results in disturbed physiology of the kidney and ureter, or the transportation of infection from the bladder to an uninfeeted kidney. Thirdly, visualization of the upper urinary tract may be seeured where catheterization is impossible on aceount of such conditions as a contraeted tubereular bladder, prostatism, or bladder tumor. Fourthly, an understanding of the normal upper urinary traet physiology is becoming more and more a part of our diagnostic routine, since proper kidney drainage is often the basis upon which a kidney infection is cleared up.

Our work has been carried on in the past six months with a preparation known as Neo-skiodan. We have found that this drug possesses, more than any of the others, those properties which are necessary for obtaining satisfactory results. Neo-skiodan is excreted in sufficient concentration to give good visualization of the pelves and ureters on the roentgenogram. The opacity is usually insufficient for successful fluoroscopy, but this is not a great disadvantage since we have access to the use of serial pyelograms, thereby obtaining definite evidenee of kidney physiology. The patient's reaction to the injection of the drug is nil in most cases, and only rarely do we see a transient nausea or bodily flush. Warming the drug in a water bath to body temperature generally eliminates all reactions. The quantity of the drug injected has been reduced 60 per cent from former preparations, materially adding to the convenience of injeetion.

A short description of our routine technic might not be amiss at this point. A simple preparation of the patient adds decidedly to the success of the procedure. First, the patient is asked to co-operate by limiting the fluid intake very sharply for at least twelve hours previous to the injection of the drug. The resulting dehydration concentrates the drug very materially as it is excreted from the kidney. Secondly, the gastro-intestinal tract should be cleaned out either with a cathartie on the previous day, or a colonic irrigation aided by an ampoule of pitressin hypodermieally, at least one hour before starting the procedure. It has been observed by us, as well as others, that the injection of this drug will cause the formation of a large amount of gas in the gastro-intestinal tract. This formation of gas can usually be taken care of by means of the compression bag which we shall describe shortly.

We have found that the speed of the injection bears a definite relation to the patient's comfort. This is best controlled by using a Number 22 gauge needle, which in itself sufficiently limits the speed of the injeetion.

Immediately following the injection our first picture is taken. This picture gives us some idea of the rapidity with which the drug is excreted by the respective kidneys. The second picture is taken ten minutes after the first, with the patient still in the supine position. This picture generally shows still further filling of the pelves and ureters and gives us a guide as to whether the degree of maximum secretion has been reached. Providing the maximum secretion is being obtained, we next apply compression over the lower

*Read before the Jefferson County Medical Society.

third of the ureters for ten minutes, allowing the drug to concentrate and distend the pelves and upper ureters, giving us a picture which closely approaches our best retrograde pyelograms. Compression is secured by placing a moderately distended basket-ball bladder just above the symphysis pubis, and the canvas compression belt of the ordinary x-ray table is tightened down over the bladder until a slight discomfort to the patient results. The obstruction is the result of the compression of the ureters between the pelvic brim and the basket-ball bladder.

Part of the routine, especially with female patients, is to follow immediately the compression picture with one in the erect position. The compression is then removed and the fourth picture is taken. This picture records any ptosis of the kidneys and the speed with which the pelves drain. Four pictures are usually sufficient to obtain all necessary information in regard to the upper urinary tract.

The principle of compression has been criticized, the contention being that it interferes with the normal physiology of the ureter and kidney. There may be a slight interference over the ten-minute period, but we feel that this is justified in view of the fact that we obtain a pyelogram showing the finer details, obtainable in no other way.

The prerequisites for obtaining good pictures are a fairly good renal function, moderate obstruction, and dehydration. If the function of the kidney drops below 50 per cent in two hours, the time interval between taking the picture must be increased accordingly. In cases with a function of 20 per cent in two hours, good pictures were obtained, the maximum concentration occurring from two to four hours after injection. Moderate obstruction in the lower portion of the ureter adds very materially to good definition higher up. This obstruction may be produced artificially, as was heretofore described, or may constitute the pathology under examination. The first or second picture will determine whether the artificial method is necessary. Our third prerequisite of dehydration merely serves to concentrate the dye and decrease the speed of excretion.

When offending pathology does the obstructing it generally exists in the form of a ureteral stricture, kink, calculus, prostatism, or some pelvic mass. Jarre has shown that a kidney with a normal function and good drainage will excrete the opaque material into the bladder so fast that poor pyelograms are to be expected unless some means of artificial obstruction is applied.

If a lesion of the lower ureter is suspected, it is often advantageous to have the patient void between the second and third pictures in order to allow better visualization of this segment of the ureter.



Figure I
Skiodan of normal kidney.

We are using intravenous urography advantageously as a preliminary step in our diagnosis, it often serving to point out our line of investigation and to prevent overlooking certain possibilities. Frequently renal and ureteral anomalies are completely overlooked when the examination is carried out solely by the retrograde method. This is usually due to the fact that reduplicated pelves and ureters are not filled at the time of injecting the opaque material. Providing the extra pelvis has even a fair function, such anomalies will not be overlooked if intravenous urography is used. During numerous routine cystoscopies, even when visibility is good, one ureteral orifice may not be apparent. In certain of these cases we may suspect a renal agenesia. This point is best cleared up by the intravenous method. Mechanical difficulties are often encountered which make investigation impossible by any other method. A notable example of this is the transplanted ureter, whether it be in the bladder or sigmoid portion of the colon, the resulting picture demonstrating any marked evidence of infection or obstruction. Ectopic ureteral orifices may have been suspected from the symptoms but these were not always easy to find by our older method. We have with intravenous urography a means of detecting the truth about their presence or absence, and we may possibly avoid a long, unfruitful search.

Occasionally we have a paralytic bladder which has remained sterile and we do not wish to risk infecting it by cystoscopy, yet information on the upper urinary system is desired. Let us suggest this type of case as being admirably suited for intravenous investigation.

In the field of upper urinary tract calculi, the intravenous method is most useful in determining the procedure to be carried out. When the symptoms and a shadow on a plain x-ray plate suggest a calculus, we usually use the intravenous method of visualizing the upper urinary tract to determine the relation of the shadow to the urinary tract. If the shadow is outside the tract, our investigation is complete, and we have spared the patient a cystoscopy. If there is still any question as to the relation of the shadow to the tract, this may be definitely settled by the use of stereoscopic pictures. In case the stone has completely blocked the ureter, there will be no secretion of dye from that side. Failure to secure a pyelogram on the affected side is due to the blockage of the ureter rather than to extensive kidney damage. Providing the obstruction is promptly relieved, we find that these kidneys resume their normal function in 24 to 48 hours. In case the calculus is located in the ureter, we attempt to dislodge it and allow it to pass by ureteral dilatation. A calculus in the kidney must be studied in relation to the pelvis and calices, as well as the amount of kidney destruction and infection present. It still seems necessary in most cases to supplement our findings in regard to kidney function and infection with ureteral catheterization before undertaking operative interference.

Tuberculosis of the kidney presents a field in which intravenous urography should be very advantageous. Up to the present time it has failed to measure up to expectations. Technically, it would be the ideal method of handling these cases. First, it eliminates the passing of catheters through an infected bladder with the chance of carrying infection into an uninfected kidney. Secondly, these cases often present such an intense cystitis and contracted bladder that ureteral catheterization is impossible. The disadvantages of the method seem to more than counterbalance the advantages as they stand at present. In the first place, if the lesion is of such slight proportion as not to impair the function of the kidney, then the filling defect is too slight to be diagnostic when visualized by this method. The far advanced cases usually show so much kidney destruction that the function is impaired and visualization is poor. At the present time there is a middle group of cases which retain a fair kidney function and at the same time have a



Figure II
Skiodan showing early right hydronephrosis due to kink at ureteropelvic junction.

definite filling defect in which the intravenous diagnosis is possible. In the light of recent improvements in the drug and the technic of administration, it seems to be only a matter of time until the percentage of applicable cases in this group will be definitely increased.

Renal neoplasms and polycystic kidneys also have failed to give uniform results. And the disadvantages seem to be approximately the same as in the case of tuberculosis.

Acute infections of the kidney with intravenous urography give us information only in the negative sense, namely, that it serves to rule out the possibility of gross pathology, which has not been previously suspected. Acute infections themselves fail to show any characteristic changes unless a decreased kidney function can be said to be one.

Very often the upper urinary tract in a case of prostatic obstruction demands investigation, for the extent of kidney damage and infection must be ascertained before determining whether the patient is a sufficiently good risk to withstand operative procedures. Anyone who attempted catheterizing the ureters in the presence of a large prostate appreciates the difficulties and often the impossibility of the procedure. Although intravenous delineation of the kidneys is not a substitute for catheterization and lavage in the presence of infection, nevertheless, we obtain a clue whether surgical interference will ever be possible. Certain of these pros-

tatic patients with high blood chemistries and decreased kidney function have experienced a decided repression of kidney function which bordered on uremia following the administration of Neo-skiodan. It is for this reason that we have at times been rather hesitant in its use with this type of case. We have put the intravenous method to a similar use in those cases of carcinoma of the entire bladder wall in which transplantation of the ureter is being considered. Often it is impossible to catheterize the ureters in these cases, and this serves as the only means of visualization of the kidneys and ureters.

The study of retrograde pyelograms has led all of us to make a diagnosis of stricture of the ureter or a destructive lesion of the kidney due to incomplete filling or spasm, whereas, if we had seen a picture taken a few seconds later, with the peristaltic contractions in a slightly different phase, our impression would have been entirely different. Our mistaken impression is due to spasm which is often induced by the introduction of such a foreign body as a catheter or pyelographic media. These difficulties can be entirely eliminated by serial pyelograms as suggested by Moore, by the Jarre cinex camera, or by intravenous urography.

A great deal of use has been made recently of intravenous urography for checking the structural changes in the kidney pelvis and ureter following operation. Especially is it desirable from the standpoint of the patient's comfort, and in those cases in which we are not interested in the question of kidney infection. The position of the kidney in the post-operative nephropexy may be easily determined, as well as the rapidity with which the kidney pelvis drains in the erect position. Post-operative ureterolithotomy strictures may be readily demonstrated by this method.

It seems to be the experience of many urologists that intravenous urography in children has been unsuccessful or of little value. This has not been our experience. We have used 20 cc of skiodan injected in the jugular vein of a four-month-old infant with very satisfactory results. The afore mentioned case was one of far advanced bilateral pyonephrosis with marked obstruction at both ureteral orifices and vesical neck, making retrograde catheterization impossible. We have also secured satisfactory pictures from the injection of 12 cc of skiodan in a child of five years, who had a bilateral pyelitis with grossly dilated ureters. In none of the children have we experienced even the slightest systemic reaction following the injection of the drug.

Cystography has been advocated by many as the first diagnostic step to be taken with children, following urinalysis. We are advocating intravenous urography as the first step. It has the advantage over cystography in that a good cystogram is obtained in a short time after injection, plus a study of the upper urinary tract in cases in which ureteral reflex does not occur.

In a summarization of intravenous urography we find that:

1. Diagnostic pictures are obtainable in the presence of a fairly good renal function, some type of lower ureteral obstruction, and dehydration.

2. It is especially applicable to the study of cases of upper urinary tract calculi.

3. It makes possible the visualization of the kidneys and ureters in certain cases which for mechanical reasons are impossible to catheterize.

4. Its use in cases of renal tuberculosis, tumor, or polycystic kidney will increase and the results will improve.

5. The detection of renal and ureteral anomalies has been greatly furthered.

6. Last, but not least, the patient's comfort has been increased by its use.

## DISCUSSION

**Joseph C. Bell:** Dr. Townsend has covered the subject of intravenous urography both from the standpoint of the urologist and the roentgenologist so thoroughly that little needs to be added in discussion. The necessity of close co-operation between the urologist and radiologist was mentioned by him and I believe that this should be emphasized. The x-ray findings in themselves are not diagnostic in the large majority of cases and they may be very misleading if they are not closely correlated with the other information in the case.

We have used several solutions in intravenous urography but have found Neo-Skiodan to be the most satisfactory from all standpoints. There has been no discomfort to the patient during the injections and in no instance has any serious reaction been observed. Ordinarily there is slight flushing of the skin and upon one occasion the patient vomited during the injection.

Dr. Swick has recently introduced a new preparation for intravenous urography which is prepared by Mallanckrodt Chemical Works of St. Louis. It is known as Hippuran, the chemical name being sodiumortho-iodohippurate. He reports that very satisfactory films are obtained after the intravenous administration and that fairly satisfactory ones have been made when the material was given orally. He believes that the oral administration will require further investigation before it is practicable.

In my practice films are made ten, twenty and thirty minutes after the injection unless there are indications for films at other intervals. For the past three years I have made use of compression above the symphysis for the purpose of obstructing the lower portions of the ureters. I use an ordinary basketball bladder and make firm

pressure immediately above the symphysis using a compression band over the inflated basketball bladder. In some institutions compression is made throughout the examination but in my practice it is used only after the first two films have been made. This permits normal excretion to take place during the early part of the examination showing the function of the kidneys and whether or not there is an obstruction in any part of the tract. In most instances the pelvis and calices are not very well visualized because of rapid excretion but these are usually very well demonstrated in the pressure films. It has been found that it is wise to restrict fluids for at least ten hours previous to the examination. This insures the excretion of concentrated urine and a more satisfactory shadow than can be obtained otherwise.

**D. Y. Keith:** I did not hear the essayist say anything about the value of this method in cases of ruptured kidney, or other traumatic injuries to the genito-urinary tract. Intravenous urography is very definitely indicated in such cases because it eliminates the possibility of infection. Also in the presence of abdominal tumors, we can very quickly and definitely determine by intravenous urography whether the tumor is intrarenal or extrarenal. In one a normal kidney pelvis is shown while in the other it is abnormal.

I am sure that in the future this method will come into more general use, especially among men practicing in the country, remote from large cities where the services of a competent urologist cannot easily be obtained. Under such conditions the doctor can render his patients very definite service by the employment of this method rather than attempting cystoscopy or ureteral catheterization.

**Owsley Grant,** (in closing): As Dr. Townsend has told you, we believe that, especially in the two types of cases he has described, namely (1) those in which ureteral catheterization is either difficult or impossible and (2) in children, intravenous urography with neo-skiodan or whatever you choose to use, is of real value in establishing diagnosis, and that, to a great extent, the cystoscopies and ureteral catheterizations routinely done in the past, can be obviated by this method. We believe this so strongly that we have practically discontinued making any pyelographic studies in suspected cases until after we have done a neo-skiodan injection. Of course, this adds somewhat to the patient's initial expense, but if by getting a delineation of the urinary tract we can clearly demonstrate that no pathology is present, it will in the end save the patient both expense and distress. Those of you who have done cystoscopy and ureteral catheterization know that even in the most expert hands the patient is incapacitated for a day or two at least, and for that reason we have made it a rule not to do pyelograms outside of a hospital where they can be kept under observation for at least twenty-four hours. On the other hand, with intravenous urography we not only obtain a very definite picture of the urinary tract but the individual is able to follow his usual occupation with a minimum of discomfort.

It should be emphasized that where the pictures show normal conditions, there is no particular need of urological interpretation, but where abnormal conditions are shown intravenous urography does not entirely answer that question, and ureteral catheterization is necessary to determine the fine points before any contemplated surgery is carried out.

**J. N. Townsend,** (in closing): Dr. Keith's suggestion as to the value of intravenous urography in the presence of traumatic injuries to the genito-urinary tract is a timely one. I did not mention it in my paper because we see very few such cases, but I can appreciate its importance to the general surgeon who sees a great many traumatic cases.

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## SYMPOSIUM ON THE THYROID GLAND

## THE STUDY OF THE EYES IN GOITRE*

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I wish to express my appreciation of the opportunity to participate in the discussion of this very interesting subject. My assignment by the program committee to open the discussion is perhaps somewhat misleading in that it might lead to the conclusion that the symptoms of goitre referable to the eyes are of the greatest importance in the study of this disease. The fact is—even though it may seem paradoxical—that notwithstanding the frequency of eye involvement in goitre these cases come under the observation of the oculist with relative infrequency. I am speaking from my own experience.

We know, of course, that certain forms of enlarged thyroid glands, the colloidal variety of goitre and the adenomatous type are seldom associated with eye symptoms. I recall so well during my sojourn of a year in Munich during my student days seeing a great number of persons with large disfiguring thyroid glands. These were nearly all colloidal goitres, or as they were called over there "Kropf." They were seldom seen in the eye clinics. These cases seem to be peculiarly abundant in the Bavarian alps. The adenomatous thyroids do occasionally involve the eyes (toxic adenoma), though most of this variety of goitre does not affect the ocular structures. Simple goitre of adolescence is also devoid of eye symptoms. On the other hand in the exophthalmic variety of goitre,

*Read before the Jefferson County Medical Society,

the Graves' disease of the English speaking nations and Basedow's of most of the other European nations, the eye symptoms, especially the exophthalmos, furnish one of the three chief features of the goitre syndrom, the strumous growth and tachycardia constituting the others.

It has been revealed at post mortem examination that most cases of exophthalmic goitre are associated with an increase in adipose tissue in the orbit and with vascular engorgement and oedema of the orbital tissue. The nature of the association between the hyperactive thyroid and this orbital pathology has as yet not been satisfactorily explained. The eye involvement includes practically only the structures exterior to the eyes, retinal, pupillary or other intraocular changes occurring very, very infrequently. According to some authors (Foster Moore) the interior of the eyes is never involved in hyperthyroidism.

The most frequent ocular sign in exophthalmic goitre is the Exophthalmos, which occurs, according to Sattler, in 80 per cent of cases. It occurs in a varying degree in no way in keeping with the severity of other symptoms or the outcome of the disease. Sometimes it is hardly appreciable and again it may be so pronounced as to cause the eyeball to luxate in front of the lids, necessitating tarsorrhaphy. It is slow in its development, hence is considered as one of the late symptoms of hyperthyroidism. It is usually present as a bilateral condition but cases of unilateral proptosis in goitre are not unusual (10 per cent of cases). Strangely, the unilateral cases usually involve the left eye. Frequently, exophthalmos is present to a higher degre in one eye than in the other. The eyes in exophthalmos are pushed straight forward and their motility is not restricted. In most cases the proptosis recedes after goitre operation, although it often remains as the last sign after recovery and a slight protrusion may remain as a permanent condition.

Exophthalmos is not always easy to diagnose, especially when of low degree, and occurring bilaterally, as the height of the cornea varies physiologically in different individuals. The long, or myopic eyes frequently resemble exophthalmos. We also find the interpalperbral fissure more open in some individuals than others, thus similating exophthalmos. For scientific purposes a fairly accurate instrument, the exophthalmometer, has been devised for measuring the degree of protrusion.

A frequent sign of goitre occurring approximately in 50 per cent of cases, is the failure of the upper lid to follow the eyeball on looking downward. This symptom, known as the Von Graefe sign, occurs quite independently of the protrusion of the eyeball, in fact, it may occur in the absence of exophthalmos.

A sign somewhat similar to the Von Graefe symptom consists in a retraction of the upper lid, causing a widening of the palpebral opening, thus uncovering an area of sclera above the cornea even when looking straight ahead and consequently producing a peculiar, Eddie Cantor stare, a frightened or surprised appearance. This symptom known as the Dalrymple sign is rather characteristic of Basedow's disease and is present in a large percentage of cases. It occurs independently of the Von Graefe sign and of exophthalmos. As a rule it affects both eyes but it has been observed as a unilateral condition.

Stellwag's sign is another important symptom of hyperthyroidism. By it is meant a marked infrequency and insufficiency of the blinking reflex. Instead of the normal 3 to 10 closures of the upper lids in the minute, this phenomenon may occur only once every minute or two. You can well appreciate that this infrequent winking of the lids, especially if associated with improper functions of the upper lids, may lead to dryness of the cornea and subsequently to more serious consequences, such as purulent disintegration of the cornea and ulceration.

Of the less frequent signs of hyperthyroidism I would mention paralysis of the extrinsic ocular muscles. The external rectus is said to be most frequently involved though one would gain the impression that the adductor is the one most affected for in Basedow's disease the eyes often give up early the attempts to converge. However, this insufficiency of convergence, which is known as the Moebius' sign, is only infrequently due to motor paralysis. It is largely due to the difficulty in rotating inward a proptosed eye.

Although the eyes are undoubtedly frequently and variously involved in cases of exophthalmic goitre, and thus furnish characteristic symptoms of the disease, the absence of ocular signs has no considerable clinical significance, as the presence of struma, the tachycardia and the high basal metabolic rate nearly always suffice to make a diagnosis even in the absence of ocular signs.

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**Rectum and Genito-Urinary Organs in Lymphogranuloma Inguinale.**—Gohrbandt says that lymphogranuloma inguinale has so far been considered a venereal disease unrelated to syphilis, gonorrhea, tuberculosis, carcinoma, soft chancre, or ordinary infection. Diagnosis in the early cases is easy but in the advanced case may be difficult. Frei's skin reaction, when positive, is of the greatest importance in diagnosis.

# TEN MINUTES OF THYROID ENDOCRINOLOGY*

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The thyroid first appears in vertebrates of the Cambrian and the Ordivician periods.

The thyroid, the heart, and the noto-chord made their appearances in the scale of evolution at the same period.

There was only a neuromuscular system as in worms before this.

The endocrine system, controlled by electro-chemical activity, existed in the lower order of life long before the central nervous system developed.

The hormone balance was maintained in the system by the automatic outpouring of hormones through the electro-chemical excitation.

Hormones are used up in the performance of their function, and a failure to balance the consequent imbalance, constitutes pathology.

The original "seawater molecule," still a component of tissue, contained iodine; and the marine algae contained both iodine and vitamines.

The primitive thyroid in the amphioxius opened directly into the throat.

The pharyngeal region, we are told, was as much concerned with the respiration as digestion. Nevertheless, the secretion was sent by nature through the digestive tract.

This is the first oral administration of hormones.

The thyroid is recognizable in the fetus as early as the third week.

Vitamines are synthesized into thyroid hormones, by the mother, and begin to be stored in the colloid of the fetus as early as the second month of the fetus.

Hypothyroidal activity in the fetus leads to the various phases of congenital cretinism.

The entire vegetative system, with the abdominal brain, co-operates in the endocrine functions; and with the development of the central nervous system, the thyroid is now observed to function through psychic states of fear, anger and great emotion.

The functioning ductless gland has been shown to develop a perceptible electric current.

The average human thyroid weighs less than an ounce; it is composed of two lobes and a connecting isthmus. Its tissue is distinct, and apparently lobes and isthmus are idential in structure.

Cells characteristic of fetal life, of infancy, of adolescence and adulthood mark life's cycle; cellular pathology correspondingly changes.

The thyroid is said to have one-third as much blood pass through it as circulates in the brain. This of course, distributes the autacoids or hormones.

The thyroid hormone, named thyroxine, is an organic radical with the halogen iodine.

Thyroid disease is the most frequent of all the endocrinopathies.

The relative presence or absence of thyroxine in the system causes the entire syndrome.

Colloid appears in the fetal cells after the second month, but disappears at birth.

Reappears for the infant, swells more for the adolescent and functions throughout life.

Artistic discriminating intellects, symmetrical physique, beauty of skin, hair, teeth, etc., are among its powers to give.

Experimental thyroidectomy, which of course corresponds to hypothyroid activity, has been followed by myxedematous conditions; retardation of growth, both somatic and mental; delayed ossification; delayed and faulty development of the teeth; small generative organs, immature spermatozoon; enlargement of the pituitary.

However, if the anterior pituitary be removed, the thyroid diminishes in size:

"Thyreoptropin," a hormone secreted by the eosinophilic activity, in the anterior pituitary is known to stimulate thyroid growth.

Returning to the manifestations in thyroidectomized animals, body temperature is lowered; the abdomen becomes swollen; the skin thickened; growth of the hair is impaired and the hair falls out; thymic involution is impaired, (thymic reaction is regarded as one of the causes of sudden death after thyroidectomy) there is an arrested development of the central nervous system, especially of the brain; lack of intelligence; creatine appears in the urine, and decreases in the muscles; ( a point to be emphasized in considering amino acid metabolism); carbohydrate tolerance is raised; adiposity occurs sometimes, at other times emaciation (this is the overlapping of endocrinopathies); retarded regeneration of tissue; anaemia and lymphocytosis; diminished heat regulation; lessened $CO_2$ excretion; diminution of oxygen consumption, to less than the diminution of $CO_2$ excretion, sexual function depressed; nerve cells shrunken, especially in cerebral cortex, decrease in Nissl granules in cells of cerebral cortex; cerebellum, medulla, and ventral horn--part of cord; dry skin; delay in healing of fractures and regeneration of cut nerves; red blood cells decreased; leukocytes, thrombocytes and fibrin increased;

*Read before the Jefferson County Medical Society.

failure of metamorphosis of amphibia (i. e. the tadpole retains the tail and does not progress to a frog;) hyperactivity of thyroid during regeneration after its partial removal; and enlargement of the suprarenal cortex. (Englebach.)

Hyperthyroid activity results from opotherapeutic effects, or replacement of thyroxine, in small doses—increased food consumption; large doses cause emaciation by loss of nitrogen and fat; metabolism is increased; enlargement of heart, liver, kidneys, pancreas, ovaries, testes, and suprarenal glands.

The thyroid itself becomes smaller; (this may be an explanation of the diminished basal metabolism in hyperthyroid subjects by the preoperative use of iodine or thyroid treatment). The adrenalin output is increased by the exhibition of thyroid; exophthalmic goiter has not been produced by the feeding of thyroid; hyperthyroidism, however, has resulted in some of the experiments. Thyroid feeding causes the disappearance of liver glycogen in the tissues; (one of the explanations of emaciation), tadpoles progress more rapidly to frogs; tadpoles undergoing metamorphosis—show many mitotic figures. (Englebach.)

The determination of the existent functional activity of the thyroid depends upon the fact that the active principle, or hormone of the thyroid, thyroxine, is a catalyst, accelerating—the differentiation of embryonic tissue; gaseous exchange in the lungs; and cellular activity.

The most important diagnostic indication of hypo-endocrinosis of the thyroid is the roentgenographic determination of the development of the ossification centers; the basal metabolism test, history of physical and mental retrogression. (Englebach.)

Basal metabolism, blood chemistry, and hormone reactions represent the laboratory information required in making a diagnosis.

Abnormal metabolism is more pronounced in thyroid disorders than other endocrinopathies. The specific reaction of thyroxine is determined by its effect upon basal metabolism.

Blood chemistry considerations are carbohydrate tolerance, non protein nitrogen and the blood calcium.

The thyroid derives its nerve supply from the cervical ganglia of the sympathetic division of the automic nervous system and from the parasympathetic supply through the superior and inferior laryngeals.

Through this means the usual symptoms of adreno-thyroid conditions result.

Perhaps exophthalmic symptoms of hyperthyroidism thus originate. Many phenomena of the syndrome are susceptible of explanation as due to inter-endocrine reaction.

Interrelation between the pituitary, the suprarenals, the gonads, the liver, the pancreas and other ductless glands develop varied endocrinopathies and syndromes.

Sajous points out that the thyroid and para-thyroids and the suprarenal and the pituitary circulation form one vascular system. Thus the syndrome appears from the rapidly secreted thyroxine—the goiter, the tremor, the ocular changes, the tachycardia, the respiratory rate, the flush, the temperature changes, the blood chemistry changes and the hormone reactions characteristic of hyperthyroidism.

Thyroxine is recognized as the great hydrogen carrier of the system; that means, it has the power through electro-chemical changes to induce—oxidation, reduction, condensation, hydrolysis and dehydration synthesis.

Thyroxine with these powers exerted upon the amino acids, or building-stones of the body, in the processes of metabolism thus controls every phase of ultimate cell existence.

So that it may be said whatever we were before birth, whatever we may be after birth, we owe to our thyroids.

Englebach's classification in adult life of thyroid disorders are:

A. Hypothyroidism 1. Non myxoedematous; 2. Myxodema.

B. Atoxic Goiter. 1. Colloid; 2. Nodular.

C. Hyperthyroidism. 1 Goitrous; a. Toxic nodular; b. Exophthalmic Goiter; 2. Non goitrous.

D. Intrathoracic Goiter.

The relative presence or absence of the thyroid autacoid or hormone—thyroxine—in the gland, determines its state of function, which is expressed by thyroidosis.

The postfix "osis" means "process" either normal or abnormal; it has an easy and definite combining power. "Ism" means the same, but conveys to me, in the word thyroidism, a secondary syndromic rather than a primary or causal picture.

The word goiter comes to us through the French from the Latin "guttur," which means throat—as throat disease; long usage has given it a meaning in "Webster," of enlargement of the Thyroid gland.

Measuring terminology thus, the following classification of thyroid disorders seems to meet the demands of nomenclature.

Thyroidal Colloid Goiter, Thyroidal Nodular Goiter.

Hypothyroidosis. a. Minor (or non myxoedematous) b. Major (or myxoedematons.)

Hyperthyroidosis. a. Simple and goitrous, b. Toxic, nodulated. c. Exophthalmic.

Thyroid Anomalies. "Grave's Disease,"

"Basedow's Disease," and unqualified "Goiter" have been dropped by common consent, except from history.

Simple transient thyro-toxicosis is attended by tachycardia, headache, exhaustion, fear of approaching disaster, sleeplessness, emaciation, a plus basal metabolism, and varied blood pressure and calcium findings; and by gastro-intestinal errors of metabolism, as multiple and complicated as the amino-acids and the autonomic nervous system together can compound.

This stage may be with, or without goiter, and is often unrecognized.

If recognized, the prognosis should make plain, that the condition may be relieved; and the same cause may be a second excitant.

Toxic nodular goiter, or toxic adenoma, is the type, which nodulation often enables the clinician to diagnosticate by means of the nodule, or nodules arising from the cells, either of the lobes or isthmus.

Englebach states 90 per cent of the nodules are not adenomatous, but are "localized areas of regressive hyperinvoluted epithelium scattered through the gland."

They may undergo various degenerative changes of necrosis, hemorrhage and calcification.

However, these nodules are similar to the nodules of atoxic nodular goiter, without degeneration.

So that a prognosis of degeneration can not be arrived at, without some perceivable beginning of alteration. Sometimes the forms mix, and the colloid is present also. Showing the present classification will suffer variations in proportion to a clearer knowledge.

The "goiter" or "thyroid-heart" may be present in any form of hyperthyroidism. My personal belief is that it results from the adrenal and thyroidal effects upon the heart's own secretions, and upon the vegetative system.

The eyes may or may not show exophthalmos and ocular deviations.

Blood chemistry and roentgenologic examinations are of real importance; the adrenalin reaction, and the pituitrin tests are helpful, but are variable because of complicating endocinopathies.

Englebach says, "toxic nodular goiter is usually curable," he also says "unoperated toxic nodular goiters present considerable morbidity."

Hyperthyroidosis with the exophthalmic syndrome, perhaps, is the battle ground of all adverse opinions.

Thyrotoxicosis alone is not the proven factor in this thyroidopathy.

The Cytologic pathology invariably embraces mixed types of goiter with hyperplasia of the thyroid follicles. Follicular colloid is present and has been found to be definitely increased following the administration of iodine. (Englebach.)

"The iodine remission" introduced by Plummer in the treatment of toxic goiter, has become a diagnostic test for hyperthyroidism."

The drop in basal metabolism following preoperative use of iodine has brought forth varied hypotheses. Since the thyroid gland itself diminishes after the use of thyroid administration, and there is consequently less thyroxine elaborated under the exhibition of thyroid substance, iodine may possibly act in a like way.

At any rate exhibition of iodine temporarily locks the thyroxine in the colloid, where its slow distribution allows only a remission, and not a perpetuation of diminished thyroxine in the system. If continued, thyroxine is found greatly increased in the system.

Changes in the cardiovalsular system are among the most constant characteristics of the exophthalmic syndrome.

Space is too short to elaborate the varied theories for this.

The exophthalmos and its constant visceral manifestations, of course, confer the title to this form of hyperthyroidosis.

As previously mentioned it has been proven thyrotoxicosis, alone, may not produce exophthalmos, but abdominal viseeral changes and the vegative nervous system seem responsible.

The gastro-intestinal tract is probably more overlooked, and yet more responsible for this phase of thyrotoxicosis complex, than all other possibilities. Disturbed metabolism of the amino acids and amino purines especially.

The histologic picture of the liver in some cases reported, has shown almost total destruction of "its architecture;" the bile ducts were empty and hemorrhages had occurred. The pancreas has shown similar destruction. The amino-acid metabolism invites toxicological investigation.

"All forms of excessive thyroid functions present varying degrees of hyperglycaemia," says Englebach.

These subjects are the most frequent to manifest allergy. Urticaria is both frequent and intense.

The thymico-lymphatic system is involved.

Basal metabolism reaches its highest degree in this form.

The trembling of dys-parathyroidosis is marked.

Heredity, or genes; geography, or in this case, of local vitamines; environment, and one may even say destiny, are equally etiologic factors.

The prognosis, in all thyroid disorders, will depend upon the ability to control thy-

roxine in the system; and this depends upon the treatment.

### Treatment

Prophylactic treatment of diseases of the thyroid begins with the fetus in utero.

Prenatal care requires that vitamin B, which resembles the thyroid hormone in its physiologic effect, as shown in its control of beri beri be given to the pregnant, together with such food as contains a reasonable iodine content.

Since both the over active and the under-active types may be inherited, prophylaxis must be governed accordingly.

Perhaps no disease is more scientifically controlled than diseases of the thyroid.

In the infant, one-eighth of a grain of the powdered gland may be administered in the under active types.

In the adolescent and adult thyroxine may be given hypodermically, but satisfactory results are obtained by the oral administration, and iodine in some form is beneficial. Thyreotropin or anterio pituitary hormone should be exhibited, to stimulate thyroid growth.

The saline sulphates combined with glycerine, or the bile salts have proven very effective, as the eliminant in both types of functional disturbance.

The treatment of the forms characterized by an excess of secretion require more specific delineation.

There seems to be a general agreement that the nodular forms, either with or without hyperthyroidosis, require surgical treatment.

However, Englebach found only ten per cent of the nodules were actually adenomatous.

Hence surgical treatment is not necessary except as a prophylactic measure until reasonable signs of nodular degeneration or activity is observed.

The iodine preoperative treatment is believed to store the thyroxine in the colloid for a time. Basal metabolism subsides for this reason.

The administration of thyroid substance diminishes the size of the gland. So a diminution of gland secretion would occur. Thyroxine represents only one-fourth of the iodine stored in the gland, the other three-fourths is organic iodine.

The administration of iodine to the over active subjects longer than the initial days of preoperative treatment, which is followed by reduction of metabolism is generally condemned by endocrinologysts.

Timme believes treatment, with iodine, of nonactive adenomatous glands bring about hyperactivity.

Iodine he regards as beneficial in the simple colloid type.

Personally rest, diet, and elimination, as previouly suggested; the tincture of strophanthus in three drop doses after meals; five grains of quinine hydrobromate t. i. d. and the inunctions of the red iodine of mercury over the gland have constituted the routine treatment.

The complications from the overlapping of other endocrinopathies may require the use of pituitary, suprarenal, parathyroid and thymus hormones. At the climacteric, ovarian medication is believed to relieve the overbalancing hyperthyroid.

Liver and pancreatic hormones sometimes act magically. Two subjects, following delivery, were almost instantly relieved after the addition of hypodermatic administration of liver hormones.

Medical, or hormone, treatment may require several years of medication and life long care; but in forty-one years no case coming under personal observation has failed to be greatly benefitted.

The collaborators with Barker favor operation in the nodular type, but report a much higher mortality from surgery than now results.

In many cases I have been able to control the hyperplasia, the tachycardia, the exophthalmos, the plus metabolism, the gastroenteric symptoms and the sleeplessness; but the high pitched voice and the sense of approaching ill, the lack of "joie de vivre" are too deeply engrafted to be eliminated except by the greatest cultural co-operation on the part of the younger subjects.

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**The Way He Walks.**—I need not describe to you in detail here the stamping, broad-based action of tabes dorsalis; the steppage, drop-foot gait of the paraplegic and the hemiplegic; the festinant trot of the paralysis agitans; or the stiffening shuffle of old age. Their enumeration, brings me to the question of how we may best train our eyes to do better as time goes by. I would first of all tell you simply to make a rule of having a good look at every patient as he walks into your presence or sits or stands or lies before you. To avoid embarrassment ask a question or two by all means, but study him well meanwhile. The art of medicine is largely the art of noticing. You need to cultivate constantly both the enthusiasm and the watchful patience of the field naturalist if you wish to obtain the full value and interest which clinical work can bring.—Ryle, J. A.: The Training and Use of the Senses in Clinical Work, Guy's Hosp. Gaz. 47:421 (Oct. 28) 1933.

# SURGICAL CONSIDERATIONS OF THE THYROID*

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The prime object in any phase of medicine is to ascertain the correct diagnosis, and this is certainly true of thyroid disorders.

Let us consider the disorders of the thyroid under the classification advocated by the American Association for the Study and Prevention of Goitre, which is as follows:

(1) Non-Toxic Diffuse Goitre,
(2) Toxic Diffuse Goitre, (Exophthalmic).
(3) Non-toxic Nodular Goitre,
(4) Toxic Nodular Goitre.
(5) Malignancies.

The surgical indications in non-toxic diffuse goitre are few, most frequently advocated for large goitres causing "pressure," or tracheal symptoms, and in a few cases for cosmetic purposes. So we may say non-toxic diffuse goitre may be considered essentially as non-surgical. The vast majority of young patients recover under medical treatment. Although even when we have achieved an apparent cure, and the subjects become pregnant or undergo severe stress or over work, the goitre may return in the form of a well defined nodular goitre. This is more apt to occur in those patients who have had their goitres for a period of years before treatment was instituted. Such nodular goitres will be considered later.

Two perplexing problems, however, arise in the cases of simple goitre. The high strung patient with small, firm goitres, commonly associated with ovarian dysfunction—one may consider them poly-glandular disturbances. Their chief complaint is nervousness and "choking sensation;" the goitre is scarcely palpable or not visible and it is only the firmness of the gland that permits the diagnosis. Such patients are not benefitted by surgery.

A second group, closely allied to the above, is made up of neurotics, neuro-circulatory asthenics, exhaustive neuroses or sub-standard individuals, associated with small diffuse simple goitres. In such cases, as Hertzler has so aptly put it, "When the surgeon has added his touch, no other creature of earth is so constantly miserable, and no image of hell can conjure up its equal." The diffuse goitre of adults of 30 years of age requires special study. If of recent origin and non-toxic, they usually respond readily to medical treatment; some of them, however, proceed to toxicity and it is this type that radiation may arrest in about 5 per cent of cases. The remainder usually, after many so-called "cures" finally resort to surgery and with extreme general disability.

Toxic Diffuse Goitre (exophthalmic): When a goitre becomes acutely toxic, either with or without known pre-existing goitre, operation is indicated without more delay than is necessary to prepare properly the patient for the surgical procedures. It is in this type of case that the consideration of the degree of toxicity must be of paramount importance, and most careful pre-operative and post-operative treatment carried out. Also, it is this class of patients that are so often harmed by prolonged use of medication, usually iodine or radiation, because the fluctuation in severity of the disease is too often regarded as "cures." This class of cases are considered as "syndrome diseases," and it is essential that all foci of infection be cleared up and the patient be taught to make a better adjustment to his individual environment, and to establish an endocrine balance, all of which necessitates medical supervision. In this group of cases, recurrences are more frequent, occurring in about 3 per cent, due in great part to insufficient gland being removed or the overlooking of foci of infection. Post-operative complications are also more common, such as haemorrhage, tracheal and laryngeal disorders due to technical difficulties at the time of operation.

Acute, toxic goitres that are operated upon early and completely, get well and stay well, and there is nothing more impressive in surgery than the prompt, complete recovery in such cases. The exophthalmus and symptoms promptly disappear, in contrast to the cases of long standing, and the results of delayed surgery are not to be considered surgical failures, but that such patients have not been sufficiently operated upon soon enough.

Non-toxic nodular goitre: is more of a prophylactic problem and can be completely cured by operation. The single adenomatous growths that appear in the neck of women in adult age, after pregnancies, usually are associated with a high hereditary factor, are fetal in origin, and are not cured by medication but become toxic with medical treatment. From this group, 95 per cent of all malignancies of the thyroid arise, so by the removal of these growths before 30 years of age, you prevent the possible malignancy and the evident toxicity of later years. In most cases, the growth can be removed without disturbing the remainder of the normal thyroid tissue and recurrences are practically negligible.

In the non-toxic multiple nodular goitre the patients have a hereditary history of goitre in 65 per cent of cases, and usually

*Read before the Jefferson County Medical Society.

have adolescent goitre. The multiple nodules occur in adult life after pregnancies and periods of stress, and usually grow gradually. Such cases should be removed before they become toxic and produce myocardial degeneration. In these families, before such goitres appear, prophylaxis by medication is of the highest importance.

Toxic nodular goitre: In the case of toxic nodular goitre, the condition of the heart in most instances is of greatest importance; usually, the goitre has developed in early life and average over 15 years without symptoms, and then the patient begins to develop myocardial changes. Many a heart case has been unsuccessfully treated when the goitre was the cause of the condition. This group gives the most permanent and satisfactory results, but the mortality is the highest because of the gravity of the heart condition and physical state of the patient dealt with. In such cases the heart should be treated medically as in other heart cases in preparation for operation. The time of operation is determined by the state of the heart rather than by the degree of toxicity. In these cases the toxicity is usually not very great and they respond much more readily to pre-operative preparation than in the toxic diffuse goitre cases. In these cases, hearts that have long been irregular and incompetent, after operation assume their normal function and the patient enters into a prolonged period of well being. Many such patients are also approaching the menopause and at times require treatment, assurance and encouragement in such states.

Malignancy: Occurs in about 2 per cent of all goitres that are removed. Ninety-five per cent of all cases of cancers of the thyroid occur in discreet, well defined adenomata, which are incurable by medicine. Because of the safety of operation and prevention of possible malignancy and toxicity, the removal of this type of adenoma is indicated.

If one knows he is operating upon a malignant goitre, he may be sure that there will be a recurrence, and not one has been known to live five years after operation.

Sixty per cent of the malignancies of the thyroids are diagnosed by sections of the tumor after operation. Such cases may remain free of recurrence, if the operation is complete and is followed carefully by x-ray or radium treatment. Even though the goitre is obviously incurable, if technically operable, it is justifiable to operate to prevent tracheal compression. The use of radium is also recommended in such cases, for it may retard the recurrence of the growth and at least buoys up the patient's hope and may do some good.

Secondary Operations: Are necessary because not sufficient amount of gland was removed at the time of first operation, due to condition of patient, difficulties of operation and overlooked gland or to persistent foci of infection.

Results from operation: Ninety-seven per cent of all cases operated upon are in good, or fair condition one year or more after operation with a gain in weight in 80-87 per cent and resumption of normal occupation in 86.3 per cent, with a mortality of .8 per cent.

The causative factors underlying goitres are not known and when thoroughly understood surgical operation may not then be necessary, but as yet, that time has not arrived, and surgical, when indicated and properly done, offers the quickest, most permanent and the lowest morbidity and mortality in the solution of selected goitre cases.

## DISCUSSION

**John R. Wathen:** This is a very important subject and I have enjoyed hearing the papers comprising this symposium. Dr. Bate has been very complete in his descriptions of the various endocrin theories and I hope some of them are true. I shall direct my remarks to the medical rather than the surgical aspect of the subject, with a few words about the pathology.

One important phase of the subject is the use and abuse of iodin. The use of iodin in this condition dates back to 1860 but it had fallen into disuse until revived by Plummer of Mayo Clinic in the summer of 1922. Properly used it is a wonderful remedy.

I think we are all pretty well agreed on the subject of the ordinary types of goiter, but there seems to be considerable difference of opinion concerning the diagnosis and treatment of so-called toxic goiter, which is divided into two types, adenomatous and exophthalmic. The adenomatous type usually occurs at the menopause, around the forty- fifth year. Those of long standing, say twenty or twenty-five years, are probably of fetal origin. They are characterized by a low metabolic rate and a fairly low pulse rate. They are usually bilateral and small. One objection to surgery in these cases is that the effect upon the heart is more severe than in the exophthalmic type. The fact that the poisonous energy is expended upon the cardio-renal system explains the comparatively high surgical mortality rate. It is necessary to use local anesthesia almost exclusively in these cases. The end results, however, are very good, if the patient gets well.

In the exophthalmic type we have an entirely different proposition. Here we have the force of the poisonous energy expended upon the nervous system. There is usually some degree of tachycardia, which disappears upon removal of the gland. It is frequently a unilateral condition, usually upon the right side. It is this

type of case that yields beautifully to iodin properly administered. Iodin is of little or no value in toxic adenoma, but is of great value in exophthalmic goiter. The metabolic rate is usually very high in the exophthalmic type and iodin reduces this as well as the pulse rate.

Dr. Sistrunk, of the Mayo clinic, in a paper read before the Southern Surgical Society, said that in his experience the most troublesome cases were those which had been treated by large amounts of iodin over a long period of time. Almost invariably such patients are badly dehydrated and constantly vomiting, being unable to retain food of any kind, none of which should occur if the iodin were properly administered. In the first place, do not give iodin by the stomach—use the rectum. You will find that these patients will tolerate iodin by the rectum in large quantities—it will solve the problem in nine out of ten cases. The first step in this method is irrigation with saline solution in large quantities, together with 20 grains of veronal, which acts upon the vomiting center of the brain, overcomes dehydration and does away with the necessity of using morphin. This should be carried out once a day, and when the patient is about asleep, then add Lugol solution. I use 100 drops in a quart of saline solution, which I find gives much better results than 10 to 20 drops continued over a long period of time. After three or four daily treatments by this method, you will find your patient calling for a breakfast of ham and eggs and digesting it, and they go on and get well.

**Frank P. Strickler:** I had a patient to lose the sight of an eye from exophthalmos, and in this case I tried an operation which was introduced some three or four years ago. Exophthalmos is caused by oedema of the muscles in the orbit together with an increased amount of fatty tissue, the cause of which is not known. An operation designed to relieve the effect of such a condition consists of making an incision along the eye-brow and removing the roof of the orbit, thus providing more space for the orbital contents and overcoming the exophthalmos. In many instances this operation has resulted in apparently normal eyes after very pronounced exophthalmos.

**J. Rowan Morrison:** I am glad to know that we have learned something about endocrinology. For a long time it seemed that the study of endocrinology depended largely upon the point of view—like the story of the two men carrying a dead Indian. One had hold of the head which was covered with long dark hair, and he remarked, "Poor old squaw," while the other who had hold of the feet, said, "Poor old buck." And so with endocrinology, it depends on how you look at it.

Dr. Johnson said that operation is not always advisable in every case where we find a lot of small lumps in the neck, but we must bear in mind that these adenomata may become very dangerous when they do become toxic.

I was very much interested in the instrument exhibited by Dr. Townes. It reminds me that on the occasion of a dinner given during the meeting of the National Association for the Study of Goiter here some years ago, some of the visitors from Cleveland remarked upon the comparative infrequency of large, simple goiters in the women of this locality as compared to its very much more frequent incidence in Cleveland. I can understand, as pointed out by Dr. Townes, that the standard of normal eye measurements in Cleveland would be very different to that in this locality.

**Virgil E. Simpson:** I believe it is pretty generally agreed, at the present time, among cardiologists and internists interested in the study of heart disease, that there is no such thing as a "goiter heart." By this I mean that there is nothing to be found in the heart of an individual who has died of thyrotoxicoses that would enable the pathologist to classify that heart as having belonged to a thyrotoxic individual. There are other conditions that will produce similar hearts. Hence, it is perhaps best to think of whatever condition develops in the heart of the thyrotoxic patient as being merely a sequence of the toxicity and presenting no particular pathological picture that can be considered characteristic of toxic goiter.

There is, however, a tendency for one to draw certain conclusions, after having observed a number of individuals suffering from toxic goiter, with respect to the cardiac manifestations. My own observations have led me to the conclusion that certain kinds of disturbances of heart function are more likely to occur in thyrotoxic individuals than in a scarlet fever patient, or a diphtheria patient, or any other conditions, such as la grippe, which cause damage to the heart. For example, I think it is a much more common clinical experience to see auricular fibrillation in the presence of toxic adenoma than in diphtheria. It is not an uncommon thing to see premature auricular contractions in many toxic conditions and when the toxic state disappears, the premature contraction also disappears. In nicotine poisoning from smoking or chewing too much tobacco, we see premature contractions which are relatively harmless, and disappear when the cause of the functional disturbance is removed. And so it is with auricular fibrillation, which is a step farther than premature contractions. When the toxic thyroid is removed in the majority of such instances the heart regains its normal, rhythmic function.

I cannot agree with the statement that has been made, that the damage done to the heart in toxic adenoma is greater than the damage to the heart in exophthalmic goiter; in fact, quite the reverse is true in my opinion. I have seen more prolonged and permanent damage to the

heart in a larger number of cases of exophthalmic goiter than of toxic adenoma. I expect the heart to become regular and rhythmic after operation for toxic adenoma, but I am not disappointed if the heart condition does not clear up after operation for exophthalmic goiter. Toxic adenoma is merely hyperthyroidism. All of the symptoms produced by toxic adenoma can be produced by an over-dose of thyroid substance by the mouth. Now, that cannot be done in Basedow's disease. Exophthalmic goiter is an entirely different condition. It is not a hyperthyroidism; it is rather a disthyroidism. It is a disturbance of function but it is not alone that—it is an alteration of the kind of secretion. In toxic adenoma the disturbance of function is the result of increased production of the thyroid secretion, whereas in exophthalmic goiter it is the result of an alteration in the character of the secretion, and the consequent damage to the heart is of a more permanent type than in toxic adenoma.

We used to think of goiters as either toxic or non-toxic. It was a simple matter to think of the non-toxic thyroids, including the adolescent goiter—that enlargement of the gland which occurs during puberty, especially in the female, and then to think of the deficiency of thyroid function seen in adult life, attended by an increase in weight and a let-down in the general functions, mental and physical, with a lowered metabolic rate; and then to think of the insufficiency of thyroid function that occurs postoperatively, because it is not always possible to determine just how much of the thyroid should be removed or left. We cannot say, when we leave the upper pole or the left lobe in situ, that it does not contain within itself another possible adenoma, a portion of the tumor structure that will become activated after operation and in the course of a year or two bring the patient back to the operating room. On the other hand, there is no way of determinir whether the portion of the gland left behi will supply enough thyroid substance after the operation. We may leave too little and as a consequence the patient will have a hypothyroidism.

As to the use of iodin, there are, in my opinion, only three conditions in which it serves any useful purpose. First, it is of pre-eminent importance in adolescent goiter. It is, in fact, the only thing to use in children 12 to 15 years of age in whom the thyroid gland has become enlarged. Give them iodin—and it does not make any difference in what form it is given, Lugol's solution, tincture of iodin, etc. It is purely a question of knowing the strength of the preparation we elect to use and giving the proper dosage. The same amount of iodin will produce identical results regardless of the form in which it is given.

The second condition in which iodin is indicated is a deficiency of thyroid function—not as a result of operative procedure but simply a let-down in the activity of the thyroid gland—which is so common among women at the menopause. In my experience the administration of one grain of thyroid substance daily, plus the concomitant use of iodin, gives the best results in such cases. Why? Because the iodin stimulates the function of the gland itself and thus less thyroid is required.

Third, iodin should be given in exophthalmic goiter where operative procedure is intended; if one is not going to operate it does not do permanent good usually. While it may improve the patient's condition temporarily, generally a relapse will occur and the second condition will be far more difficult to relieve by the administration of iodin than the first, and in the meantime the patient will have become weaned away from the idea of operation. Once you have diagnosed exophthalmic goiter and gotten the patient in the mood to accept operation, then give iodin, get the patient in as good condition as possible and remove the gland.

**J. Garland Sherrill:** This is a subject in which we are all interested. Years ago I learned that the simple goiters of puberty and pregnancy could be successfully treated without operation by the careful and skillful employment of medicinal agents, including iodin. Neither the thyroid gland nor the system demands a great amount of iodin and it does not require large doses to get the best results. Small doses of iodin administered in the patient's salt is about as good a way as any of treating an adolescent with some enlargement of the thyroid gland.

Since we are all fairly well agreed concerning what we know about this subject, and as there is no wide difference of opinion respecting the treatment to be employed under given circumstances, the question resolves itself into the application of ordinary common-sense, as well as medical and surgical judgment, to the individual case.

Toxic adenomata should be removed. Before the condition becomes toxic the patient may get considerable benefit from the use of iodin, or occasionally from the administration of thyroid substance, but too much thyroid simply makes the goiter become more troublesome.

I agree with Dr. Simpson that the use of iodin in hyperthyroidism or exophthalmic goiter is useful for a short time, say two or three weeks, but in exaggerated cases, with the pulse running away and the patient losing weight and sleep, iodin does no good. In such cases putting the patient at rest, away from work and excitement, with an ice-pack over the heart, will usually result in a quiescence of the symptoms and eventually the patient becomes a safe operative risk.

It requires the intelligent co-operation of the

internist and the surgeon to give these patients the benefit of our best efforts and to do credit to the profession.

**Adolph O. Pfingst,** (in closing): Dr. Strickler's suggestion concerning the operation for removal of the roof of the orbit in cases of extreme exophthalmia is a pertinent one. This idea of giving vent to the supra-abundant orbital adipose tissue was introduced by cranial surgeons on the West coast, Naffsinger of San Francisco being the chief proponent. It is a very valuable procedure under conditions of extreme proptosis. However, a less formidable means of preventing or curing corneal ulceration so frequently seen in exophthalmic goitre is the shortening of the palpebral fissure by means of a lateral tarsorrhaphy. Neither of these operations are supposed to replace thyroid surgery but they have a place in emergencies, before the eyeball has had time to recede after thyroidectomy.

It seems to me, from observations made in the Alpine regions of Austria, that the simple goitres observed there occur in individuals otherwise normal. Nearly all the men in the Austrian Alps are afflicted with goitres, some of large proportions, and many women also have it. Whether the mountainous environment in which they dwell has anything to do with the development of the large thyroids is problematical. It has been attributed to various causes, though a definite cause has not been demonstrated. These natives with strumous necks are as a rule devoid of nervous symptoms. They impressed one as being markedly phlegmatic. It is a sturdy race.

**R. A. Bate,** (in closing): Most of the questions raised in the discussion were anticipated in the paper. On behalf of the internists I feel inclined to quote the Bible to these dissenting gentlemen: "And Job answered and said, no doubt but ye are the people and wisdom shall die with you." (Job 12:1-2).

Dr. Wathen's remarks questioning the facts regarding endocrinology bring to mind an incident that occurred during my student days. While out in the woods with an old Negro man, who lived on our place, it began to rain, and wishing to air my newly acquired knowledge of physical geography, I undertook to explain to the old Negro how rain is produced. He listened until I had finished and then exclaimed, "Good Lord! Does you believe it takes all that to make a little rain?"

In connection with the administration of thyroid substance, we must bear in mind that so small a quantity as 1 mg. of thyroxine will profoundly affect the human system. It has been estimated that a difference of only 3½ grs. of thyroxine separates the diseased from the normal individual.

As to the effect of thyroxine upon the heart, it is estimated that 90 per cent of all heart conditions are due to the thyroid. Right here I wish to make the prophecy, that (probably within the next twenty years) it will be shown definitely that the thyroid and the suprarenals, together with an adynamic nervous system, are responsible for every reaction of the heart.

Endocrine Medicine—Englebach—Volume III, p 252.—(The Adolescent and Adult).

"The relation of tumor, to calcium metabolism, goes far to support the incretory function of the parathyroids. It not only clarifies the etiology of many vague osseous diseases, but also establishes the parathyroid factor, as a cause of the hypocalcemias, related to the spasmophilias and tetanies. In addition considerable light is thrown upon the pathogenesis of the diathetic lithiases (calculi, calcified tumors) and many of the involutionary degenerative changes, such as arteriosclerosis and oteosclerosis. This also applies to the healing of degenerative lesions following acute and chronic infections, in which calcium deposition is a part of the process. For instance, the calcification of tuberculous lymph nodes, and pulmonary lesions, those cardiac calcifications following acute infections, and the atheromatous plaques of syphilitic aortitis may be accelerated, or retarded modification, of the parathyroid influences upon the mobilization and excretion of calcium. Jaffe, Bodansky, and Blair, by subcutaneous injection of parathormone, produced the clinical and pathological picture of osteitis fibrosa, in guinea-pigs, including the production of new bone tissue. The latter disappears, as soon as reparative processes are allowed to take place, by discontinuing the parathormone. New bone quickly appears beneath the periosteum and endosteum and in the haversian canals in the fibrous tissue of the metaphysis just distal to the epiphyseal plate."

Carcinomatosis is often found associated with tumors and hyperplasia of the parathyroids.

**W. O. Johnson,** (in closing): At the 1933 meeting of the Kentucky State Medical Association in Murray, Kentucky, Dr. Kimball in his address mentioned that there had been isolated a substance arising from the pituitary gland, due to the excessive stimulation of the pituitary by the thyroid secretions, which produces exophthalmos experimentally. This will afford a much better understanding of exophthalmos.

It is an interesting fact, from a surgical viewpoint, that in nearly every case in which exophthalmos persists after operation, it is due to leaving too much of the gland in situ, or to overlooking an aberrant thyroid gland. In most instances, when sufficient tissue has been removed, the exophthalmos disappears following operation.

I have intentionally avoided discussion of metabolism in the paper. As Dr. Sherrill has pointed out, one of the fundamentals in the treatment of all thyroid conditions is the exer-

cise of common-sense. We do not operate upon these patients for their metabolic disturbance, but for the relief of the toxicity, the effects of which will vary greatly in different individuals. One individual may have a comparatively low degree of toxicity with a great amount of damage to the general system, while another may have a high degree of toxicity with comparatively little damage to the general system.

I agree with Dr. Simpson's remarks concerning the bad effects of thyroid toxins upon the myocardium. It has been my experience that in true exophthalmic goitre which has existed over a long period of time, the heart condition is the last to show improvement, while in toxic adenomata in older persons the heart shows improvement within a comparatively short period of time.

As to the length of time these patients live following operation, if operation is done before there is general deterioration of the body, satisfactory results are obtained and normal span of life can be expected.

## MEDICAL MELANGE*

O. P. Nuckols, M. D.

Pineville.

I have selected this title because it gives me license to wander around from subject to subject, without reference either to logic or sequence.

My real purpose, however, is to discuss briefly a number of topics, which might be very aptly styled cardiac miscellany.

To me there is a remarkable fascination about the study of the heart, both in its normal and abnormal states. It appears to me that the psychology of this attitude is very plain and simple, for every one of us carries about with us a heart within our bosom, which never fails to manifest its presence; it is always on the job, beating ceaselessly, and is a wonderful time-piece, placed near our vest pocket, which reminds us that we live, move and have our being.

### Heart Murmurs

In the halcyon days of the past, the heart murmur was considered the *sine qui non* of all heart disease, but more recently there has come down from Mt. Sinai amidst figurative thunder and lightening, a modern Moses with a new commandment "Thou shalt not believe in heart murmurs for heart murmurs do not mean heart disease." In spite of this wondrous *ipse dixit* and while the significance of murmurs has often been overdrawn, and more often misunderstood, it still remains a fact that a murmur of either functional or organic origin is a signal of distress, a sign of disturbance, and just as a sound man does not murmur over his work, likewise a sound heart does not murmur. This general condemnation of murmurs, this sudden abdication of the one time monarch of cardiac signs, cannot with any reason of justification be indiscriminately applied to all heart murmurs.

There are a few murmurs that are in reality pathognomonic, and upon it hangs the final diagnosis. The true fact of the matter is that a diagnosis of aortic regurgitation is not justified in the absence of the diastolic murmur. It is quite as true of the aortic systolic murmur in aortic stenosis and the presystolic murmur in mitral stenosis.

With these facts in mind I still maintain that a murmur is still a fact to be reckoned with in all heart disease, and a proper understanding of its diagnostic value depends upon its location, the time within the cardiac cycle, its quality, and its transmission.

It has been claimed that often murmurs are heard during life which indicated a valvular lesion, which at autopsy showed no valvular disease. We must not forget, however, that a systolic murmur may be heard at the pulmonic area which is purely functional, also a systolic murmur at the apex, which may be due to a relative mitral regurgitation, caused by a chronic or more acute dilatation of the left ventricle, thus pulling the valves apart, which would show no pathology at autopsy. Also it must not be forgotten that in all cases of the later stages of myocardial failure, the same condition may be present. In all such cases, the mitral ring dilates with the cavity of the left ventricle, the valves remaining perfectly normal in structure, but cannot adequately close the mitral orifice. I recall a number of cases in which I gave a very unfavorable prognosis several years ago on account of a mitral regurgitant murmur, who are now free from murmur and present all the evidence of a perfectly sound heart. We are all familiar with rejections for life insurance many years ago on account of a slight murmur who have already almost lived out their life expectancy.

In approaching the study of cardiac murmurs the element of time is to be considered as of first importance. We look for three murmurs at the base in organic disease of the heart. Two of these are systolic in time and one diastolic. One of the systolic murmurs is to be heard at the pulmonic area, or the region of romance, as some times referred to, and the other at the aortic area. The diastolic is limited to the aortic area and down the left margin of the sternum.

The aortic systolic murmur, usually rough or rasping in quality, is due to aortic stenosis. The current of blood as it is forced onward by the contraction of the left ventricle, meets with resistance at the aortic ring, and the

rush of the current is slowed or impeded, producing the abnormal sound. To the reverse the aortic diastolic murmur is heard after the blood has been expelled by the left ventricular contraction into the aorta, and with the recoil of this most important artery, the valves fail to hold and a part of the blood regurgitates into the left ventricle again; hence the sound is heard during relaxation or diastole. If the valves are very seriously crippled, it may obliterate the second sound of the heart entirely.

The other systolic murmur heard at the pulmonary area is quite frequently, or I might say usually due to deterioration of the blood, or what is called a hemic or functional murmur, however, as rare exception it may be due to a congenital pulmonary stenosis.

A systolic murmur at the apex usually signifies a mitral insufficiency, which may be either organic or relative. This incompetency causes the blood to flow in two directions—into the aorta and back into the left auricle, which produces the murmur. This murmur is often reflected toward the axilla. The other apex murmur to be heard is presystolic or late diastolic in time, and is caused by stenosis or obstruction of the mitral valve. When the left auricle contracts to carry the blood into the left ventricle, it meets with obstruction, which produces the abnormal sound.

So, when we boil down the important murmurs to be heard in the left auricle we might condense it into a statement or hypothesis like this, which is easy to remember. A systolic murmur heard at the apex means insufficiency and a systolic murmur heard at the base means stenosis.

A presystolic murmur heard at the apex means stenosis and presystolic or diastolic heard at the base means insufficiency or regurgitation.

So, let's summarize in the following fashion: A murmur may mean much or it may mean little so far as prognosis is concerned, yet we must remember that in one case it may be insignificant, and in another it may mean—

"The rift within the lute,
Which soon shall make the music mute."

### Rheumatic Heart Disease

Rheumatic heart disease hangs like a dark cloud over the lives of the young. Cabot found in the study of 600 cases of heart disease, that approximately 45 per cent were of rheumatic origin, 34 per cent of the arteriosclerotic and hypertensive type, 12 per cent syphilitic, 1 per cent thyroid, and the remaining 5 per cent of unknown origin. Munly in the study of 1,300 cases of a mixed group, found 35 per cent rheumatic. Since it is principally an affection of children and the young, crippling many of them for life, our attention should be particularly directed to this group of heart cases.

Until more recent years rheumatism was regarded as a general infection, having arthritis or inflammation of the joints as its principal manifestation and when heart disease occurred, it was considered as a complication or sequel. However, it is now regarded as a general infection, which when it invades the joints it causes arthritis, when it lodges in the brain chorea, and when it invades the heart, rheumatic heart disease. Other evidences may be tonsilitis, growing pains, wry neck, or rheumatic nodules in the skin. It is rather rare after 30 years of age and the majority of cases are before 30. The heart is often involved simultaneously or just following the attack, and more important still is when the heart is the only manifestation. Some cases are immediately fatal, but most cases extend over a long period with valve lesions the rule.

One of the hot beds of infection in children is the throat and especially the tonsils, and to add to the danger in children the circulation is rapid and absorption very active, also in children the terminal capillaries that supply the valve leaflets are relatively much larger than in those of more advanced age and as a result of this anatomical anomaly, they become literally packed with the germs of infection, thus rendering them much more susceptible to infection and endocarditis. This, at least in part, explains why children are so much more frequently victims of rheumatic heart disease.

### Chronic Myocarditis or Myocardial Degeneration

This comprises the second great group of heart diseases and is made up largely of those past middle life. It has been stated that one doctor out of every two dies of some form of heart disease and if this be but half true, it should be a very interesting subject to the medical profession.

Myocarditis is not a very satisfactory term as it suggests inflammation, whereas an overwhelming majority of the cases of heart disease occurring in those of past middle life would be more accurately classed as myocardial degeneration, or arteriosclerotic disease. It is a known fact that most of these cases are due to primary involvement of the heart muscle itself and that antecedent infections of various sorts play an important role in the etiology.

The nourishment of the heart muscle is impaired by either an interstitial myocarditis, or by a sclerotic condition of the coronary arteries. Upon the one hand, if the interstitial tissue is involved, the capillaries become compressed and the blood supply and nour-

ishment is impaired, and upon the other hand, if the coronaries become sclerosed and their lumen impaired, the same results follow, which inevitably will be manifest by cardiac weakness.

What then are some of the indications of myocardial weakness? Dyspnea, of effort, cardiac asthma, premature contractions, partial heart bloc, pulsus alternans, or coronary occlusion. Dyspnea of effort is most usually one of the earliest symptoms of impaired myocardial function.

We are all familiar with the man or woman past 40 or 50 who will tell you that "I feel just as well as I ever did, but cannot hold out to walk or climb hills so well; I have to stop and puff and blow every once in a while." What has happened? The heart muscle has weakened due to a degenerative process that has taken place in the muscular walls of the heart. This may be due in part to age and in part to wrong methods of living. These patients should live carefully and not run to catch trains or climb mountains. We must never forget that the heart is a muscle and contracts and relaxes much like the muscle of your arm or leg and is affected by lack of proper nutrition just the same as other muscle tissue.

Before the days of diphtheritic antitoxin most of the children who died of diphteria were victims of diphtheritic myocarditis, or septic inflammation of the heart muscle due to the diphtheria bacillus and the toxins they produced. There arises now from my subconscious mind many tragic scenes from those pre-antitoxin days.

The more chronic form of heart disease met with in people of middle or past middle life, usually has a quite different history and is different in type. It is not so often that we meet with the more acute myocarditis or with valvular lesions primarily as it is with the more chronic degenerative process brought about by long continued infections or arterial changes.

### Blood Pressure

Blood pressure is a subject that has been very much cussed and discussed but not so very seriously studied. We often talk very glibly about blood pressure as though it were a disease entity in and of itself, however, it is only a symptom of an underlying condition. There is a range, within which we look upon as normal, which is taken as a good omen that all is well, and it does have its favorable significance.

Blood pressure in its very essence responds to the physical laws of the *vis a tergo* or the power from behind and the *vis a frontis* or the resistance to the onward flow of the blood current. Its level or normal is maintained by a proper balance between these forces.

I am going to coin my own phrase by saying that all deviations from the normal may be divided into two great groups, known as functional and organic. The functional deviations are caused by functional disturbances which may be corrected, and the organic deviations are due to structural changes in either the visceral or circulatory system, which may or may not be remedied. Hyperpiesia is the term usually applied to designate the functional group, and hypertension the organic, or the group in which there is more or less permanent damage.

Normal blood pressure should bear a ratio of 1-2-3, or, in other words, the pulse pressure should represent approximately one-half the diastolic. To make this clear, if the diastolic be 80 and the pulse pressure 40, the systolic would be 120, whereas if the systolic should be 160 with a pulse pressure of 80, it would show quite a heavy heart load and if continued indefinitely, would bring about hypertrophy of the left ventricle.

Systolic pressure is easily influenced by functional factors, while the diastolic is not and the systolic and pulse pressure taken together indicate heart values or heart force and the diastolic shows end resistance.

Permanent elevation of the diastolic pressure above 100 practically always means pathology, while elevation of the systolic means increased heart work to carry on, yet may not always mean organic change.

The blood pressure is some times indicative of a particular heart lesion, as in aortic insufficiency the systolic may be elevated and the diastolic very low, also in mitral stenosis the systolic is low due to the small amount of blood passing from the auricle to the ventricle resulting in a small current of blood and a small pulse.

A continuous pulse pressure higher than the diastolic, is a danger signal and means that the heart will soon fail.

The other horn of the dilemma is the near approach of the systolic and diastolic, which means that the heart muscle is failing. The old idea that age is symonymous with blood pressure, in my judgment, is a mistake, while it is true that added years bring about many changes in the arterial tree, it is more often that some inside or outside influence, such as over-exertion, faulty hygiene, over-eating or psychic disturbances are the real underlying factors.

Build must be taken into consideration in estimating normal blood pressure; a man 5-4 and weighing 120 will have a lower pressure than one the same height weighing 160 pounds.

Like the pulse, it is impossible to fix a defi-

nite rate of blood pressure that would apply to all cases as the normal, regardless of age, sex, height and weight.

The Mutual Life Insurance Company, from an experience based upon 150,000 risks which were accepted, has placed the systolic pressure of healthy men of all ages and builds between 114 and 142. It is my opinion that we should regard all systolic pressures above 150 and all diastolic pressures above 100 as abnormal.

The experience of insurance companies shows that the mortality increases by leaps and bounds when the systolic pressure exceeds 140; at 150 the rate is increased 34 per cent above the normal, at 160 and over the rate increases over 400 per cent. It is another experience that overweight with high blood pressure makes for an increase.

This all tells us not to minimize the significance of blood pressure readings for any great deviation in either direction signifies danger. One statement I want to make with all emphasis, and that is, that a continuous blood pressure of 160 Hgm always means a potentially failing heart. Retribution may loiter but is sure.

### Prognosis

Now, just a few words about prognosis. It is almost deplorable that so little is written and so little attention given to the subject of the prognosis of cardiac lesions. Considering the great increase of cardiac disease within the last few years and the further consideration of the sad fact that one physician out of every two dies of some form of heart disease and many of them quite young, it does seem that the various factors determining the prognosis of cardiac disturbance, ought and should, be allotted a very prominent place in our mental equipment.

First, let me say that a correct diagnosis from an etiologic standpoint, furnishes us with the key to prognosis, as well as the guiding compass to proper treatment.

Most of us have to rely upon the old methods of diagnosis by signs and symptoms, using the eye, the ear, the hand with delicate touch, with the application of our accumulative experience, which after all, is like the hand-made shirt, being better than the machine-made. We must admit that the cardiograph is a fine and delicate instrument, but it has no inductive faculty or diagnostic skill, and in the majority of cases of early heart disease, is more ornamental than useful.

With our special senses we look the patient over, we make our physicial examination, we observe his gait, his spirit, his push and his pep, his mental and physical stamina, all of this no instrument can either appraise or appreciate.

In valvular lesions it is especially important to know the particular valves involved and the particular type of damage; however, it is still more important to know the etiology. Aortic regurgitation has a very unfavorable prognosis, yet if rheumatic, it is more favorable than if syphilitic. Mitral stenosis has the next most unfavorable prognosis, due largely to the fact that the system at large suffers from an inadequate arterial blood supply and venous stasis, and secondly to the fact that the auricle soon dilates and brings in its train auricular fibrillation.

Mitral regurgitation and aortic stenosis have a somewhat better prognostic outlook taken from beginning to end.

These lesions are all attended by their significant murmur and give some additional clue in prognosis, for instance, a systolic murmur at the apex which does not entirely displace the first sound of the heart is more favorable than if it does; likewise, a diastolic aortic murmur which does not entirely displace the second sound of the heart is more favorable than if it does, for in both instances it shows that the valve is not so completely destroyed. Again, a murmur that has been loud and gradually becomes weak and less audible is a poor prognostic sign unless it be relative murmur due to a relaxed ventricle. And again a murmur that has been weak and in response to adequate treatment becomes more pronounced is often a good prognostic sign. Or, if it responds to stimulant treatment for a short time and returns to its former weakness, it indicates that you are losing the fight.

There is another factor known as cardiac reserve which must be taken into account. The normal healthy heart has a wonderful reserve which enables it to respond to all kind of emergencies and excesses. This is a factor no instrument has ever been devised to accurately measure and must be judged from observation and whenever cardiac response indicates a good reserve, it is a favorable prognostic sign.

The question of heredity should not be overlooked for a family history of heart disease and many deaths from such cause, adds to the gravity of the outlook.

Anemia is an important factor in the consideration of the cardiopath, for in my judgment the heart muscle supplied with plenty of oxygen by and through the red blood cells has a much better chance to carry on than the anemic heart. For, after all, it is the heart muscle that points like the mariner's needle to the harbor of safety. The driving force of the heart is the muscle and most of the difficulties of chronic heart disease begin and end with the condition of the myocardium. Hypertrophy is a constructive process and dilatation is a destructive process, and if hy-

pertrophy was not followed by dilatation, valvular defects would be shorn of many of their terrors.

Concluding, I want to offer this one suggestion, that if there be any organ more indispensable than another to our hold upon life, it is the heart, for with its first wave of contraction, life begins and when it ceases to function, we are numbered with the things of the past.

Then let's consider heart disease in the same light as we do tuberculosis, make every endeavor to discover it in its very incipiency, to the end that we may, if possible, correct it before serious damage is done, or at least mitigate, and add comfort and happiness, and prolong the lives of the many thousands who needlessly go to premature death.

## MEMORIAL

## DR. I. S. WESLEY OF LIBERTY

James Givens Carpenter, M. D.
Stanford.

The sudden death of Dr. I. S. Wesley of Liberty, on February 1, 1934 was a great shock to his numerous friends and patrons in Casey and adjoining counties. He was a very popular and skillful physician and had a prominent position in the medical profession. He was the son of devout Christian parents, Dr. Joshua T. Wesley and wife, Delilah Wesley. His birth was a great joy and blessing to his parents and to humanity. His life was filled with benevolence and he tried, like his refined and elegant parents, to live each day with "malice towards none and charity for all." He would rather forgive and forget a wrong than hold hostility. Though small of stature and an invalid several years, due to a hip-joint disease when a child, he had a precocious mind.

Filled with vivacity and wit, he was an entertaining conversationalist. His numerous friends were always glad to hear him talk and demonstrate his congenial personality. His wit, humor, mirth, irony, and mimicry would have made him an ideal minstrel or clown, or stage-actor. P. T. Barnum, no doubt, would have paid a large sum to have had Dr. I. S. Wesley in his great circus.

Dr. I. S. Wesley, though an invalid in his youth and "teens" was possessed of studious habits and had his training from the best of teachers and his parents. He was a graduate of the Janey-Wash Institute of Middleburg, Casey County, Kentucky. Having finished his school career, he chose the medical profession for his life-work. He studied medicine with his accomplished father, an alumnus and graduate of the University of Louisville Medical School in May, 1893, one of the best and the first medical colleges west of the Allegheny mountains. He graduated in the same class with his distinguished father, who took a post-graduate course.

After becoming a doctor, Dr. Wesley located at Middleburg, Kentucky, and soon had a large self-supporting practice. April, 1893, at Stanford, Kentucky, he attended the Central Kentucky District Medical Society and obtained membership and was appointed Essayist for the next meeting at Harrodsburg, Kentucky, Thursday, July Third; subject, the Pathology, Diagnosis, and Treatment of Dysentery—a prodigious task. He became frightened, and like Jonah, begged to be excused and not accept the arduous duty of Essayist. He did not relish going to Nineveh—Harrodsburg—to preach to the members of the medical profession and save the people, and like Zacheus, being of small stature, he would have climbed a sycamore tree to have escaped from the Herculean labor. Yet he was a prodigy, this young beloved M. D., and was on time in July with an erudite and replete essay, still like Jonah, afraid to preach, and received congratulations and praise after presenting the essay. Before he began reading the essay he whispered to the President, "Please do not let the lions and giants of Nineveh devour me in their discussions."

In 1895, Dr. I. S. Wesley, in company with Drs. Russell T. Ramsey of London, Dr. Samuel S. Perkins of Bee Lick, Dr. Eugene J. Brown of Mount Vernon, and the writer, went to the Polyclinic of Philadelphia, Pennsylvania for post-graduate studies and to attend the marvelous, skillful, life-saving surgical clinics of Dr. Joseph Price and other distinguished teachers, physicians and surgeons, and were personally and royally entertained in the homes at dinners by Drs. Joseph Price, William Ashton, Ernest La Place, John B. Deaver, Edward Montgomery, William B. Keene, and John V. Shoemaker, a pleasant memory never to be forgotten.

Dr. Wesley, on his return home, with his distinguished, benevolent and beloved father, and other doctors, helped organize the Lincoln County Medical Society, the Casey County, the Russell County, and the Russell Springs District Medical Societies embracing the counties of Casey, Lincoln, Russell, Adair, Pulaski, Wayne, and Cumberland. These Societies also held clinics and gave post-graduate instructions to the less fortunate physicians and laity. Dr. I. S. Wesley observed and practiced the Golden Rule, was a promoter and organizer of the Casey County Hospital and a physician and surgeon on its staff.

Dr. I. S. Wesley and his father were erudite and skillful diagnosticians and knew delays were dangerous and tried never to postpone

for tomorrow what should be done today or tonight and advised and demanded early life-saving surgery if possible, should be done the first 12 hours and not as a last resort, and with the lowest death-rate possible. Many operations were performed in log cabins and box houses at night. Some of this emergency surgery was done at night successfully, and lives saved. Coal-oil lamp-light was used. Head-mirrors reflected the light upon the field of operation. Dr. I. S. Wesley and father were patrons and had many patients in the Joseph Price Hospital of Stanford, Kentucky during its successful career of ten years.

Casey County was a prolific field for "Clinics" and "Major Surgery." Dr. I. S. Wesley and father had a large and unique experience in minor and major surgery, viz. strangulated hernias, appendicitis, stone of the bladder, lock-bowels, ovarian and uterine tumors. One tumor successfully removed weighed 37 pounds. They also did resection and exsection of dead bones, exsection of the elbow joint, much rectal surgery and many cataract extractions in blind eyes, with restoration of good useful vision in most cases.

The hospitality of Dr. I. S. Wesley and his father was generous and noble and both of them were devout members of the Methodist Church, Master Masons, and Masters of their lodges and loyal Kentuckians, American Patriots, and candidates for the Kingdom of Heaven. Presidents, George Washington, Thomas Jefferson, Abraham Lincoln, Andrew Johnson, Cleveland, McKinley, and Theodore Roosevelt were their ideals as presidents and American Patriots.

Dr. I. S. Wesley spent three years of his professional life in Lancaster, Kentucky and enjoyed a lucrative practice all that time. He made a reputation there. He was a member of the U. S. Casey County Board of Health and Member of the Southeastern Kentucky District Medical Society and a member of the Kentucky Medical Association. His father, Dr. Joshua Taylor Wesley, had been a member, delegate, Councilor, and First Vice-President of the Kentucky State Medical Association and President of the Middleburg Bank. He had a pure and undefiled religion, visiting the widows and orphans in their sorrows and kept himself unspotted from the world. He tried daily with his devoted Christian wife, to make his home the House of God and the Gate of Heaven, trying to live the Enoch life, walking with God. Early in his Christian life, like Elijah, he went on to know the Lord. After reaching Bethel, the "House of the Lord," he went on to Jerico, the Fullgrown Moon in the Christian life. At the River of Death with the Mantle of Faith, he beat back the water and crossed over dry-shod into the Father's House of Many Mansions.

Dr. I. S. Wesley left a daughter, Mrs. Cora Belle and her children, a son, R. D. Wesley, a sister, Mrs. Florence Wesley Williams, a brother, Jason Wesley, and a nephew, Professor James Wesley Drye, President of the Spencerian Commercial School in Louisville, Kentucky.

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## FORUM

To the Editor:

Williamstown, Ky., December 7, 1933

Presuming that there is a real organization of the Doctors of Kentucky, there is certainly an important and an immediately incumbent duty it owes itself.

Any physician who is compelled by force of location, to carry a stock of drugs and other supplies for dispensation, if he will look over his old checks and receipts, will find that for the past two or three years he has been practically working for pharmaceutical concerns and instrument supply house. If he has a price catalog of date, 1928, from any concern that does business in Kentucky and will compare it with one issued by the same firm in 1933, he will find that there has been no reduction or a negligible one during that five years of all but universal calamity.

Not long since, by mistake, a certain jobber in pharmaceuticals sent to the writer one gallon of Elix Buchu, Juniper and Acetate of potash—forty—twenty and eighteen to the ounce, for which he charged on his statement, $6.00. Having just a short time before purchased the same package for $4.50, I wrote him about it and asked if his price was not somewhat out of line. An answer came promptly, saying there was no error. The price was correct and if I did not care to pay $6.00, to please give it to their salesman, his next visit.

This incident, too, merely shows the attitude of the drug peddler toward his "come on" and to give the dispensing physician a crude idea of the amount and type of consideration and fair dealing the pharmaceutical pirate deems his due and right.

From these pharmaceutical houses the operator of a combination drug store in any two by four town, can buy their output from 40 per cent to 60 per cent cheaper than can the physician—and if the physicians did not prescribe or recommend their products, would you please tell me how short a time it would require to close their doors—even of those most blatantly rich?

The houses represented in this section (good ones) can be counted on the fingers of two hands—and allow for a small hunting accident—but brother, can't that tail wag some dog?

C. D. O'HARA, M. D.

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NEXT MEETING HARLAN, OCTOBER 1-4, 1934


## COUNTY SOCIETY REPORTS

**Mason:** Following is a brief sketch of the combined heart clinic and medical meeting held March 14th.

About three weeks ago, all the doctors in Mason County and those counties surrounding Mason were notified that on this date, the regular meeting day of the society, Dr. J. N. Patterson, of Cincinnati, would conduct a heart clinic, starting at four o'clock in the afternoon. They were asked to attend and refer a case of heart condition to the clinic. This gave them ample time to select an interesting case for Dr. Patterson to examine, and proved very successful as Dr. Patterson was busy from the time he arrived, a little before four o'clock, up until the time for our dinner at seven o'clock with patients that the local doctors had brought to the clinic. The cases referred to Dr. Patterson showed that the men had selected them very carefully as most of them were of very unusual and interesting types.

After dinner at the White Manor Hotel, the original group that had attended the clinic in the afternoon were joined by several other physicians from town. More cases were then presented, one from town that had not gotten in on the afternoon clinic, and two cases that Dr. Patterson had arranged to have transported to Maysville from Cincinnati for special study, one an Italian with marked mitral stenosis, and the other, a man over sixty, with a complete heart block. The Italian is well known in medical student and teaching circles, having been demonstrated to classes in cardiac lectures for many years. The heart block case was one where the block started high in the heart, probably at or above the sinus auricular node. His heart beats but 38 times a minute.

Dr. Patterson had specimens of hearts and aortae which were excellent examples of various pathological heart conditions. These he carefully demonstrated, giving a short history of the patients from whom each was taken. He then gave a very instructive lecture on various forms of heart conditions, including an explanation of the use of the electro-cardiograph. These were supplemented wiith two sets of lantern slides.

The clinic and lecture together were just one of those affairs which thrill every physician present and give him a real post-graduate course in cardiology.

The following physicians were present: W. E. Hord, A. O. Taylor, A. R. Carrigan, W. G. Phillips, H. N. Parker, C. V. Stark, Allen F. Murphy, of Maysville; H. M. Yancey, of May's Lick; J. B. O'Bannon, of Flemingsburg; and J. N. Blades, of Butler; and O. W. Brown, of Falmouth, Route No.1.

Tentative arrangements have been made to hold a Neurosyphilis clinic at the April meeting, April 11th.

ALLEN F. MURPHY Secretary.

**Jefferson:** The following is the June program of the Jefferson County Medical Society:

**June 4th—Case Reports**

Carcinoma of Penis, Two Cases, J. Duffy Hancock, M. D.

**Essay**

The Hydrotherapy Treatment of Osteomyelitis, Richard T. Hudson, M. D.

**June 18th—Case Reports**

Enlarged Prostate, E. S. Allen, M. D.

**Essay**

The Menace of Human Defectives, John S. Boggess, M. D., Medical Officer in Charge U. S. Marine Hospital.

CHARLES M. EDELEN, Secretary,
WALTER HUME, President.

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**Grant:** The Grant County Medical Society had its regular meeting at the office of the Health Department in Williamstown, March 21, 1934 with the following members present: J. J. Marshall, J. D. George, J. L. Price, N. H. Ellis, C. M. Eckler, J. W. Abernathy and C. A. Eckler.

The minutes of last meeting were read and approved. Communications were read and filed by motion. Next in order were reports of committees and there was one committee composed of C. M. Eckler and C. D. O'Hara, as a special committee having completed its work, the committee was discharged. There were no clinical cases reported at this time and we entered into the topic of the evening at once. This was an up-to-date subject at the present time, as the entire country is full of them. The subject, "Measles," was opened by J. J. Marshall as a round table discussion. Dr. Marshall was thoroughly abreast with the subject, showed how it occurred in cycles of about three years and usually go from 7 to 22 days before the disease manifests itself after exposure. Has had some this season ill as late as ten days before the eruption appeared. He cites a characteristic cough with eye symptoms almost pathognomic. He says it is a lot more serious disease than people think, he reported a case of meningitis following measles, which was fatal, and numerous cases of otitis media and pneumonias, gives cracked ice for vomiting in measles, sedatives of opium for coughs and other excellent thoughts he brought out as he went along, making the introduction very thorough indeed.

J. W. Abernathy was next and advised keeping a child from having measles until after five years of age, if possible. He gives them plenty of cold water and observes carefully hygienic measures.

J. L. Price was next and being one of the oldest physicians in the county stated that the only time he was every sick in bed in his life was two days with measles. He stated Bright's disease, middle ear troubles and pneumonias were the things to watch as complications.

N. H. Ellis brought out the percentage as to age that severity was noticeable. Talked on ventilations and convalescent serum and stressed the point that children should not attend school where some were sick in the family with measles.

C. M. Eckler brought out the fact that measles is no respector of persons, as he has had them from infancy to 80 years of age. Believes strongly in prophylaxis and the self limitedness of the disease. Brought out many interesting complications. Advises to tell the patient of the danger of blowing the nose which may lead to mastoid trouble.

J. J. Marshall closed the subject, bringing out some new facts that had not been reported.

For our next meeting we planned to have an able man from Louisville whose subject will appear later.

We adjourned to meet the third Wednesday in April at the usual hour.

C. A. ECKLER, Secretary.

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**Third District:** The Third District Medical Society met at the Helm Hotel, Bowling Green, on Wednesday, April 18, 1934, with thirty-five doctors present.

Dr. W. H. Neel reported a case of chronic empyema with cavity formation, exhibiting the patient and x-rays.

Dr. G. Y. Graves reported two cases of hematuria due to hydronephritis resulting from stricture of the ureter, showing the x-ray findings.

Dr. Austin Bell, Hopkinsville, presented a paper on "Tuberculosis from the Viewpoint of the General Practitioner," which was discussed by Doctors Wells, Howard, Turner, Strother and in closing by Dr. Bell.

Luncheon was served in the main dining room of the Helm Hotel.

Dr. H. S. Shoulders, Nashville, talked on "X-ray Diagnosis of Tuberculosis," exhibiting numerous films which showed the x-ray efficiation of pulmonary tuberculosis in the early and late stages. This was discussed by Drs. Reardon, Toomey and Graves.

Dr. Hollis Johnson, Nashville, discussed "Tuberculosis from the Viewpoint of the Specialist," using x-ray films to illustrate cases and also stressed the routine treatment of tuberculosis in the home, insisting that a majority of the cases must, under present conditions, be treated in the home rather than in private Sanatoriums.

Dr. Alfred Blalock, Nashville, discussed the "Surgical Treatment of Tuberculosis," considering (1) phrenicotomy, (2) pneumothorax and (3) thoracoplasty.

The meeting adjourned to meet in Hopkinsville the middle of June.

JNO. H. BLACKBURN, Secretary.

## BOOK REVIEW

SURGICAL CLINICS OF NORTH AMERICA: (Issued serially, one number every other month.) Volume 14, Number 2. (New York Number—April 1934) 293 pages with 71 illustrations. Per Clinic Year (February 1934 to December 1934.) Paper, $12.00; Cloth, $16.00 net. Philadelphia and London: W. B. Saunders Company, 1934.

A New York number is always a welcome volume to the surgeon's library and this book is no exception to the rule. The articles are well written and amply illustrated. Of special interest are the reports from the clinic of Dr. W. F. MacFee, of St. Luke's Hospital. The monograph on Ludwig's Augina, illustrated with anatomical pictures in great detail was written by Dr. Edwin Ramsdell and is a very valuable contribution to surgical science.

---

TREATMENT OF THE COMMONER DISEASES MET WITH BY THE GENERAL PRACTITIONER—By Lewellys F. Barker, M. D., Professor Emeritus of Medicine, Johns Hopkins University. Visiting Physician, Johns Hopkins Hospital, Baltimore. J. B. Lippincott Company, Publishers, Philadelphia. Price $3.00.

This volume by such a famous author is a welcome addition to the general practitioner's library, it deals with the management of some of the internal disorders not infrequently met with by the physician engaged in every day practice.

The ten chapters contain a brief synopsis of recent achievements in the science of medicine in a condensed form easily accessible and it is with pleasure we recommend this book to our readers.

---

TREATMENT IN GENERAL PRACTICE: By Harry Beckman, M. D., Professor of Pharmacology at Marquette University, School of Medicine, Milwaukee, Wisconsin. Second Edition, Revised and Entirely Reset. 889 pages. Philadelphia and London: W. B. Saunders Company, 1934. Cloth $10.00 net.

This new edition of Dr. Beckman's popular book has been completely rewritten and is thoroughly up-to-date. It contains a number of new and approved treatments, many of which are not to be found in any other book. One can not but be impressed by the thoroughness with which he has eliminated so many of the unestablished and discarded methods as well as the addition of well established new methods of treatment. A number of drugs and diseases, not included in the previous edition, are given consideration. It is one of the most practical works on therapeutics that we have seen and should occupy a prominent position in the library of every practicing physician and specialist.

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THE WRITING OF MEDICAL PAPERS. By Maud H. Mellish-Wilson, Editor of the Mayo Clinic Publications. Third Edition, Revised. 12 mo. of 180 pages. Philadelhia and London. W. B. Saunders Company, 1929. Cloth, $1.50 net.

Many physicians excellent in their vocation unfortunately do not possess the art of writing, yet possess the desire to write well with the least possible effort or delay. For this need such a volume has been prepared by Mrs. Wilson. It supplies this knowledge in a brief form and has proven a valuable aid also for those who edit or proof read such papers. It guides the untrained and the trained writer to prepare for publication articles with brevity, accuracy and clearness.

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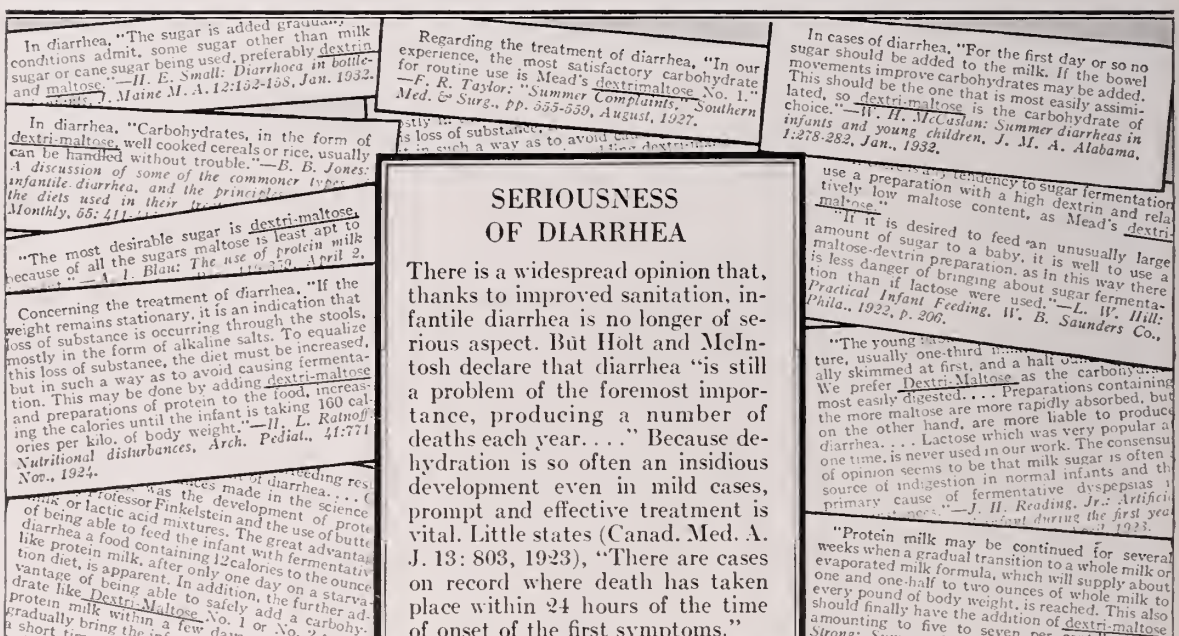
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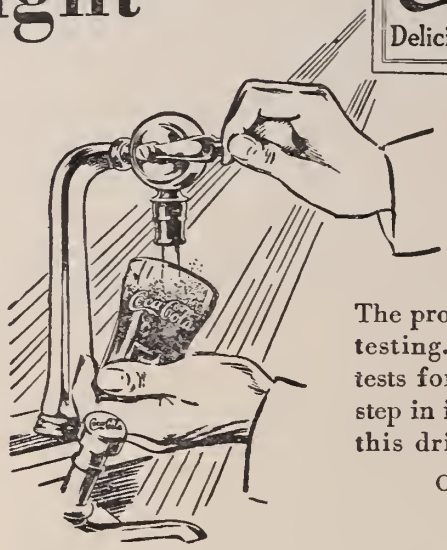
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# CALENDAR OF COUNTY SOCIETY MEETINGS

| COUNTY | SECRETARY | RESIDENCE | DATE 1934 |
|---|---|---|---|
| Adair | N. A. Mercer | Columbia | July 4 |
| Allen | A. O. Miller | Petroleum | July 25 |
| Anderson | J. B. Lyen | Lawrenceburg | July 2 |
| Ballard | F. H. Russell | Wickliffe | July — |
| Barren | Paul S. York | Glasgow | July 18 |
| Bath | H. S. Gilmore | Owingsville | July 9 |
| Bell | O. P. Nuckols | Pineville | July 13 |
| Boone | R. E. Ryle | Walton | July 18 |
| Bourbon | W. B. Hopkins | Paris | July 19 |
| Boyd | R. G. Culley | Ashland | July 3 |
| Boyle | P. C. Sanders | Danville | July 10 |
| Bracken | J. M. Stevenson | Brooksville | July 2 |
| Breathitt | O. M Goodloe | Jackson | July 17 |
| Breckinridge | J. E. Kincheloe | Hardinsburg | July — |
| Bullitt | S. H. Ridgeway | Shepherdsville | July — |
| Butler | G. E. Embry | Morgantown | July 4 |
| Caldwell | W. L. Cash | Princeton | July 3 |
| Calloway | A. F. Russell | Murray | July 5 |
| Campbell-Kenton | Luther Bach | Bellevue | July 5-19 |
| Carlisle | G. W. Payne | Bardwell | July 3 |
| Carroll | J. M. Ryan | Carrollton | July 10 |
| Carter | R. G. Townsend | Grayson | July 10 |
| Casey | Wm. J. Sweeney | Liberty | July 26 |
| Christian | M A. Gilmore | Hopkinsville | July 17 |
| Clark | R. H. Scobee | Winchester | July 20 |
| Clay | J. L. Anderson | Manchester | July — |
| Clinton | S. F. Stephenson | Albany | July 21 |
| Crittendon | C. G. Moreland | Marion | July 9 |
| Cumberland | W. F. Owsley | Burkesville | July 4 |
| Daviess | A. Thorpe | Owensboro | July 10-24 |
| Elliott | | | July — |
| Estill | Walter Cox | Irvine | July 11 |
| Fayette | John Harvey | Lexington | July 10 |
| Fleming | J. B. O'Bannon | Flemingsburg | July 11 |
| Floyd | E. E. Martin | Allen | July 13 |
| Franklin | W. S. Snyder, Jr. | Frankfort | July 5 |
| Fulton | Glynn F. Bushart | Fulton | July 11 |
| Gallatin | J. M. Stallard | Sparta | July 19 |
| Garrard | B. Earl Caywood | Lancaster | July 19 |
| Grant | C. A. Eckler | Dry Ridge | July 18 |
| Graves | H. H. Hunt | Mayfield | July 2 |
| Grayson | C. F. Blankenship | Leitchfield | July 26 |
| Green | S. J. Simmons | Greensburg | July 2 |
| Greenup | Carl M. Gambill | Greenup | July 23 |
| Hancock | F. M. Griffin | Hawesville | July 2 |
| Hardin | D E. McClure | Elizabethtown | July 12 |
| Harlan | Clark Bailey | Harlan | July 28 |
| Harrison | W. B. Moore | Cynthiana | July 2 |
| Hart | S. F. Richardson | Munfordville | July 3 |
| Henderson | Walter O'Nan | Henderson | July 9-23 |
| Henry | Owen Carroll | New Castle | July 20 |
| Hickman | Chas. Hunt | Clinton | July 5 |
| Hopkins | David L. Salman | Madisonville | July 5 |
| Jackson | | | July 7 |
| Jefferson | Chas. M. Edelen | Louisville | July 2-16 |
| Jessamine | J. A. VanArsdall | Nicholasville | July 19 |
| Johnson | P. B. Hall | Paintsville | July 14 |
| Knott | M. F. Kelley | Hindman | July 28 |
| Knox | F. R. Burton | Barbourville | July 27 |
| Larue | D. W. Gaddie | Hodgenville | July — |
| Laurel | Oscar D. Brock | London | July 11 |
| Lawrence | W. C. Gose | Louisa | July 16 |
| Lee | A. L. Hoskins | Beattyville | July 14 |
| Leslie | John H. Kooser, Acting Secretary | Hyden | July — |
| Letcher | R. Dow Collins | Whitesburg | July 31 |
| Lewis | J. D. Liles | Vanceburg | July 16 |
| Lincoln | Lewis J. Jones | Houstonville | July 20 |
| Livingston | Wm. C. Davis | Salem | July — |
| Logan | Walter Byrne, Jr. | Russellville | July — |
| Lyon | H. H. Woodson | Eddyville | July 3 |
| McCracken | Leon Higdon | Paducah | July 11-18 |
| McCreary | R. M. Smith | Stearns | July 2 |
| McLean | G. L. Thompson | Calhoun | July 12 |
| Madison | Hugh Mahaffey | Richmond | July 19 |

| COUNTY | SECRETARY | RESIDENCE | DATE 1934 |
|---|---|---|---|
| Marion | W. C. Griffey | Lebanon | July — |
| Marshall | S. L. Henson | Benton | July 18 |
| Mason | Allen F. Murphy | Maysville | July 11 |
| Meade | A. A. Baxter | Brandenburg | July 26 |
| Menifee | E. T. Riley | Frenchburg | July — |
| Mercer | J. Tom Price | Harrodsburg | July 10 |
| Metcalfe | P. W. Bushong, Acting Secretary | Edmonton | July — |
| Monroe | Geo. E. Bushong | Tompkinsville | July — |
| Montgomery | D. H. Bush | Mt. Sterling | July 10 |
| Morgan | W. H. Wheeler, Acting Secretary | Betsy Sayne | July — |
| Muhlenberg | G. L. Simpson | Greenville | July 10 |
| Nelson | R. H. Greenwell | Bardstown | July — |
| Nicholas | T. P. Scott | Carlisle | July 16 |
| Ohio | Oscar Allen | McHenry | July 4 |
| Oldham | S. J. Smock | LaGrange | July 3 |
| Owen | K. S. McBee | Owenton | July 5 |
| Owsley | D. E. Wilder | Booneville | July 2 |
| Pendleton | W. A. McKenney | Falmouth | July 11 |
| Perry | R. L. Collins | Hazard | July 9 |
| Pike | M. D. Flanary | Pikeville | July 2 |
| Powell | I. W. Johnson | Stanton | July 2 |
| Pulaski | M. C. Spradlin | Somerset | July 12 |
| Robertson | | | July 16 |
| Rockcastle | Lee Chestnut | Mount Vernon | |
| Rowan | G. C. Nickell | Morehead | July — |
| Russell | J. B. Scholl | Jabez | July 24 |
| Scott | F. W. Wilt | Georgetown | July 9 |
| Shelby | W. E. Morris | Shelbyville | July 5 |
| Simpson | N. C. Witt | Franklin | July 19 |
| Spencer | | | July 10 |
| Taylor | W. B. Atkinson | Campbellsville | July — |
| Todd | B. E. Boone, Jr. | Elkton | July 5 |
| Trigg | H. L. Wallace | Cadiz | July 4 |
| Trimble | J. J. Gerkins | Bedford | July 25 |
| Union | D. C. Donan | Morganfield | July 25 |
| Warren | Hal Neal | Bowling Green | July 11 |
| Washington | J. H. Hopper | Willisburg | July 18 |
| Wayne | R. E Teague | Monticello | July 5 |
| Webster | C. M. Smith | Dixon | July 27 |
| Whitley | C. A. Moss | Williamsburg | July 5 |
| Wolfe | G. M. Center | Campton | July 2 |
| Woodford | Chas. F. Voigt | Midway | July 5 |





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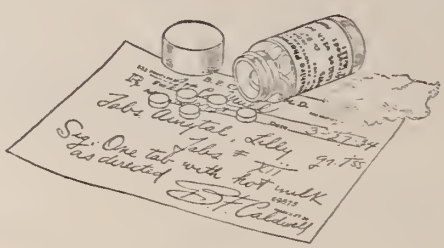
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# KENTUCKY MEDICAL JOURNAL

BEING THE JOURNAL OF THE KENTUCKY STATE MEDICAL ASSOCIATION

**Published Under the Auspices of the Council**

VOL. 32 NO. 7 BOWLING GREEN, KY. JULY, 1934

## THE PROGRAM

Doctor James H. Pritchett, the Chairman of the Committee on Scientific Work for the Harlan Meeting, asks us to announce the following as the subjects which have been tentatively agreed upon for the Scientific program for the Harlan Meeting, October 1-4, inclusive:

Study of 100 cases of ectopic pregnancy,
Feeding the Diabetic,
Lead Poison in Children,
Internal Hemorrhoids: Treatment by Non-Surgical Methods,
Cancer of the Uterus. Illustrated by Slides and Pathological Specimens,
Some Further Studies and Observation of Hyperthermia (Fever Treatment) Cases,
Spinal Cord Tumors: Symptomatology and Differential Diagnosis,
Treatment of Diarrhea in Infancy,
Amebiasis,
Diagnosis and Treatment of Congenital Pyloric Stenosis,
Endocrine, Vitamine and Allergen Relativity,
Appendicitis in Children,
The Treatment of Tetanus,
Medical Treatment of Arthritis.

The essayists have been selected for these subjects and most of the papers are now in process of preparation. Doctor Pritchett is announcing these subjects with a view to asking the members who are particularly interested in them, or in any other subjects of general interest, to write him about them. He is reserving time for members from out in the State who have had especially interesting and valuable experience to take places on the program. He will be glad to hear from any member who is interested in any particular development in medicine.

Those of us who have had the privilege of attending County Society meetings in various parts of the State recently have been delighted with the excellent scientific programs that have been presented. Many of these papers should be brought to the attention of the whole profession of the State at the State meeting. The purpose of the Committee on Scientific Work to make the program really representative of the whole profession can only be attained with the cooperation of those of our members who are sufficiently interested in scientific programs to volunteer the preparation of papers. We are making this urgent appeal to the membership as the program will be completed within thirty days after you read this issue and we bespeak your cordial cooperation with Doctor Pritchett and his Committee.

## THE HARLAN MEETING

The details of the Program for the Harlan Meeting are nearing completion. The quota of papers allotted to Louisville is filled; however, the number assigned to the State-at-large is not. Those who have signified their intention of presenting papers, please write to the committee.

A feature of the Program will be a number of Round Table discussions. Several men in the various specialties will conduct these. An hour will be selected in which there is no General Session. The plan is as follows: Tuesday, 4:00 to 5:00 P. M., four or more groups, consisting of from thirty to forty men each, will meet in a designated room, all in the same building. Various problems will be discussed by the physician in charge. Which group one attends will depend upon the phase of medicine in which he is most interested. There will be a Medical, Surgical, Obstetrical, Pediatric group, and perhaps others, if interest enough is manifest. As an example: Doctor Edward Speidel will conduct the Obstetrical group and will discuss the problems that the physician encounters in practice. Questions will be answered and a general discussion follow. The same plan will be instituted in the Surgical, Medical and Pediatric groups. It is planned to have two men in Surgery, two in Medicine, one in Obstetrics, one in Pediatrics and, perhaps, one in each of the other specialties. It would be a great help if those interested would write in before September 15th, suggesting questions for discussion. Bear in mind that these groups will meet at the same hour in different rooms in the same building, at an hour when there is no General Session. This is a new departure but, we believe, will be well received.

Another feature will be the Past-Presi-

dents' Reunion. As many as attend will be seated on the rostrum at the opening session. Appropriate badges will be furnished and a luncheon in their honor will be given. President-Elect Howard will be host.

If you have other plans or suggestions, please write at once to J. H. Pritchett, M. D., Chairman, Program Committee.

## CONCERNING CONGENITAL MALFORMATIONS

The Gynecean Hospital Institute of Gynecologic Research of the University of Pennsylvania, is conducting an intensive study of families into which congenitally malformed individuals have been born. It is common for mothers of congenitally malformed infants to ask "If I should give birth again, what is the chance that my next child will also be defective?" In an attempt to answer this question, this survey is being made.

Important objects of this investigation of malformations are: (a) To determine their frequency of recurrence in the same family. (b) To possibly throw light upon their etiology.

Families possessing one congenitally malformed child have been located through medium of death certificates. Data from this source are being augmented by those from hospital records, family physicians, and from home visits. Undoubtedly, some of these families will exhibit recurrences of malformations, but the number of the latter families probably will be small. In order to locate as many additional families as possible, which possess two or more defective offspring, the study is being made. For this purpose this institution is asking the assistance of the medical profession and medical periodicals.

Special interest centers in families in which malformations have appeared in two or more children. Physicians who have knowledge of any such families are urged to communicate with Dr. Douglas P. Murphy, Gynecean Hospital Institute, University of Pennsylvania, Philadelphia, Pa.

**Gravidic Endometrioma of Abdominal Well.**—Martin and his associates report a case of gravidic endometrioma. In a woman, aged 37, who had undergone a cesarean section 8 years before, they discovered in the course of a new pregnancy a parietal tumor which was a fistulized endometrioma. The biopsy of the tumor, totally extirpated in a second cesarean section, confirmed the diagnosis of endometrioma of the abdominal wall. It exhibited a marked and diffuse decidual reaction. The authors think that what appears to be a uterine fistula is frequently a fistulized endometrioma of the abdominal wall.

## ORIGINAL ARTICLES

## THE GROWING INTERDEPENDENCE OF MEDICAL AND DENTAL PRACTICE*

O. B. Coomer, D. D. S.

Louisville.

The conception of oral focal infection as it is understood today belongs to modern dentistry and medicine. The fact, however, that mouth pathology exerted an injurious effect on the body, has been observed and reported in the dental and medical writings of all times and explained in various ways according to the etiological concepts of the age.

In the Talmud, written about 200 B. C., is found a description of a disease called Caphdina. It is described as a dangerous disease beginning with the gums and finally attacking the intestines. Hippocrates reports the case of an Athenian boy who had suppuration of the ear which was caused by a tooth that had been aching. Pierre Fauchard 1690-1761, the founder of Modern Scientific Dentistry lists eighty case reports, many of which describe the relation of diseases of the teeth and gums to morbid systemic conditions. Benjamin Rush, professor of medicine in the College of Philadelphia made the following statement in 1801, "I cannot help thinking that our success in the treatment of all chronic diseases would be very much promoted by directing our inquiries into the state of the teeth in sick people and by advising their extraction in every case where they are decayed."

In Bond's Dental Medicine he describes the suppurative action around a dead tooth and concludes the paragraph with the following, "In this state food is no longer completely chewed and reaches the stomach mixed with mucus, pus and blood. Dyspeptic symptoms, cough, neuralgia, nervous depression, hysterics and hypochondria may be expected to attend such conditions of the teeth." And so from the beginning down through the ages we find numerous references to this subject in medical and dental literature.

In spite of these observations nothing was done about it and Dentistry as a profession was limited to restorations, extractions, and some crude attempts at treatment of gum disorders, with no thought, whatever, as to their possible effect on the rest of the body.

The medical profession, as a whole, paid

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absolutely no attention to dental infections, as they, too, considered it of little importance, and that the mechanical restorations of the dentist could have any bearing on health was not even dreamed of. In fact, this apathy of the medical profession as a whole, toward dental infections has continued down to modern times. Quoting Dr. William J. Gies, of the School of Medicine, Columbia University, "Organized medicine has been traditionally inattentive to the prevention and treatment of the abnormalities of the teeth and adjacent oral stuctures and to the correlations between oral and systemic conditions. Most medical faculties, owing largely to a lack of understanding of the scope and import of oral health service are strangely unwilling to teach medical students even the medical part of dentistry."

Both professions were unaware of biological relationships, and Dentistry for many years continued as it was, purely a mechanical profession, striving only to perfect the art of better restorations.

The turning point came with the theory of focal infection, first mention of which was made by Billings in a paper read before the Chicago Medical Society in 1911. Much impetus was given to the changing order of things by the general use of the x-ray. Soon after this a number of investigators, medical, dental and others, began work along this line. Time does not permit mention of even a small part of these investigations, but some of their conclusions are interesting.

First, let us consider adjacent extensions of oral infections. The mouth with its proper temperature, its moisture, and its food supply presents a very favorable incubator for the growth of bacteria. These may travel by continuity of surface to the posterior nares and thence to the sinuses, or they may also go by way of the Eustachian tube to the ear. The ear may also be affected by toxic irritation of the auditory nerve.

The interdependence of nasal, oral and throat disease is well known. The continuity of the mucous membrane, the lymphatic, blood and nervous connections; drainage of septic materials from the nose and the continual swallowing of saliva, pus and bacteria from a diseased buccal cavity, all favor throat infection.

Because of the direct lymphatic connection between the gum around the last molar and the tonsils, infections around this tooth seem to be responsible for many tonsil disturbances.

Chemical and experimental evidence of the causative role of mouth sepsis in ocular disease is abundant. Price says, "No work is more striking and satisfactory than relief by removal of dental foci in many types of eye involvement." Many cases of disturbance of vision, iritis, conjunctivitis and numerous other eye disturbances have been reported as cured or benefitted by removal of oral foci.

Bacterial invasion from the oral focus to the eye may go by way of the blood, lymphatics, antral mucous membrane, by the periosteum of the malar bone, or through the bone itself. The eye may also be affected by reflex irritation of the trigeminal and sympathetic nerves. This irritation may be due to impactions, pulp stones, cysts, exposed pulps, or foreign material in the pulp canals. Later literature contains many references linking oral sepsis with cancer in an etiologic relation. Malignancies of the tongue due to irritation from irregular teeth or poor dental work have been reported by many. Also cancerous growths following extraction of infected teeth: and due to ill fitting dentures. Steadman states, "That aside from the sexual organs over 86 per cent of all cancer occurs in the alimentary tract. Direct irritation of the tract as a result of mouth sepsis is considered by many to play a big part in the etiology of this condition. There are many reports of skin diseases that have been attributed to the secondary effects of oral infection, in the following ways:

a. By direct spread of infection from the oral mucous membrane.

b. By setting up infective gastritis.

c. By lowering the resistance of the patient to pyogenic infection of the skin.

d. By sensitization of the skin to toxins from an oral focus.

e. By the action of the toxins from an infective focus on the nervous or endocrine sympathetic system.

From a study of the material it is evident that mouth infections may cause diseases of the digestive system in six different ways as follows:

d. By sensitization of the skin to toxins, bacteria from the mouth cavity itself through the blood and lymphatics.

2. By swallowing the decomposition products and bacteria.

3. By direct extension of mouth pathology to the gastro-intestinal mucosa.

4. By producing reflex disturbances of the normal alimentary secretions and peristalsis.

5. By causing disturbances due to insufficient mastication.

6. By creating a toxemia with resulting endocrine exhaustion which indirectly determines gastro-intestinal infection.

A number of investigators have studied and reported the relation of mouth infection to pediatrics. Walker noted the loss in weight

of nursing infants when the mother was suffering from septic teeth. The nursing infant may also be influenced by the effect that carious and other septic processes may have on the process of lactation in the mother. Charles H. Mayo says "80 per cent of children's diseases arise from the mouth, nose and throat, and that 90 per cent of deaths result from infections from the same area."

Statistics are abundant on the relation of mouth sepsis to progress in school.

There is abundant evidence that oral infections may have a definite relation to many other pathological conditions such as arthritis, endocarditis, nephritis, anemia, diseases of the respiratory, nervous, endocrine, excretory, reproductive, skeletal and muscular systems and to transmissible diseases. MacNevin and Vaughan in summing up this evidence as presented by thousands of reports, investigators, observations and case histories, reach the following conclusions:

1. That not all physicians and dentists are given to fads. The careful painstaking and unbiased observations of the more conservative and conscientious workers are very valuable. In a great number of case histories from the earliest times down to the present, it is not probable that in all there was some mistake in the observation and reporting of phenomena.

2. Even if absolute proof of the existence of oral and other focal infection cannot be submitted, it is nevertheless a very reasonable assumption.

3. The strong circumstantial evidence advanced, strengthens this assumption.

As the findings of these investigators became generally known we entered into the "Dead Tooth Era." Something new had been discovered which by some was considered a cure for everything. The practice of medicine became very simple. All that was necessary was to extract all the teeth—don't wait for a scientific diagnosis—just remove them all and you will be sure to get the right one. Obviously this was unsound and could not last, but it did cause scientific men to do something with the result that today a thorough oral diagnosis consists of a careful consideration of all the possible sources of an oral focus which have been demonstrated to be the following: Caries, vital degenerating pulps, periapical infection about pulpless teeth, or teeth with non vital pulps; dental cysts, residual infection after extractions, impacted and unerupted teeth, mouth filth due to tartar debris, poor bridgework, etc.; gingivitis and stomatitis or any inflammatory condition of the mucous membrane such as Vincent's angina, pyorrhea, furred tongue and the infected lingual tonsil. In addition to this the relation of the teeth to each other and to their opponents in the opposite jaw must be considered, also, the relation of the jaws to each other, and what effect this tooth and jaw relation is having or may have on the supporting structures of the teeth; the adjacent buccal and lingual structures, and the relation of the head of the condyle to the auditory canal.

Besides a true focal infection in which secondary colonization of bacteria takes place, there are other injurious effects upon the body such as: (1) Intoxication; (2) Sensitization; (3) Reflex disturbances through pressure or irritation of the ends of the trifacial nerve; (4) Indirect injury brought about through constant lowered resistance and (5) Aggravation of existing disease.

This last mentioned influence is considered by many to be equal in importance to a definite focus, as recovery in many cases is expedited by the removal of an aggravating source or oral sepsis, even though the oral infection may have no direct connection with the pathologic condition. The removal of oral infection or mouth pathology has sometimes been given as the reason for a rapid recovery in certain diseases, and justly so. The most important part played by the removal of the abnormal mouth condition, however, was the general tonic effect exerted by the removal of one cause of lowered systemic resistance. According to Mayo and others, this is absolutely necessary in the best treatment of gastric ulcers and other pathological conditions of the alimentary tract. This influence of mouth sepsis alone is enough to justify the careful consideration of mouth conditions in the treatment of many diseases.

At the present time with our high incidence of caries and diseases of the supporting structures, and with so much evidence of the possible relation of these conditions to numerous systemic disturbances, the enlarging field of the dentist in the elimination and prevention of oral infections is evident.

Many dentists have overlooked the effect of body and general health on mouth conditions, and have tried in vain to eliminate some forms of oral pathology by local treatment alone when obviously the oral lesion was only a symptom of some general systemic disturbance. Some forms of pyorrhea and other gum disorders appear to be systemic in origin and are often associated with such diseases as diabetes. Patients with diet deficiencies, or disturbed calcium metabolism are much more susceptible to caries and gum disturbances, and the dentist who treats these oral conditions without some consideration of the systemic disturbance by a physician is not rendering his patient the best type of health service. A constructive sense of deficiency should possess the conscientious practitioner, be he medical or dental, who in any in-

stance and for any reason, fails to do for his patient what he knows good practice requires.

It is now evident that Dentistry is becoming, and must become, the full health service equivalent of a highly developed specialty of medical practice. Again quoting Dr. Gies, "Dental practice includes the opportunity and the obligation, based on adequate training, (1) to detect oral symptoms of abnormalities within the closely related domains of dermatology, laryngology, ophthalmology, otology and rhinology and of some pathological conditions in other parts of the body—also symptoms of various systemic ailments and of communicable diseases; (2) to give the patient advisory health service on (a) the need to obtain the opinion of a physician about such observed conditions, and, also, on (b) dietetics, hygiene and the prevention of diseases; and to (3) consult effectively with physicians in the patient's behalf."

The dentist cannot longer function efficiently as a separate unit, it is now necessary for him to co-operate with the physician if he is to render the best possible health service to his patient. On the other hand consideration by the physician of the possible influence of mouth sepsis is now an important factor in questions involving prevention and treatment. It is my humble opinion that this field has been too long neglected, and that the solution to some of the unsolved problems of medicine may be found in the mouth.

An article by the associate dean of the Medical School of Columbia University impressed me, and in closing I use his words, "I can see no reason why the degree, Doctor of Dental Surgery, honestly held and honorably upheld, should not in the future deserve equal respect and esteem from the public with the degree of Doctor of Medicine, provided it is held by a similar type man, and whatever their future relationship may be, let medicine and dentistry now go forward side by side as friendly collaborators in the estimable undertaking of offering help to those who need it and adding to the happiness of life as much as to the length of its span."

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**Cutis Laxa.**—Reyn's cases were marked by changes in the collagenic connective tissue together with deficiency of subcutaneous tissue, and showed a tendency to hemorrhage in the skin and subcutaneous tissue. He says that dermatolysis probably depends on a malformation (mesodermal), in some cases originating on a hereditary basis, and appears mainly in men. Persons with this anomaly must seek occupations requiring little physical exertion and try to avoid all trauma.

## DENTAL INFECTION AS RELATED TO THE FIELD OF MEDICINE*

JOHN STITES, M. D.

Louisville.

Such a subject as this is far too large in its scope to be incorporated in one brief paper. Dental infection is related to all the specialties of medicine and it is not in the power of one limited to a certain type of practice to bring forth its importance to every member of this meeting in a way that it should be done. I feel that it would have been far wiser (no particular criticism of the program committee) to have presented this subject as a symposium rather than as a single paper, but since I have been given the subject I will try to mention briefly a few of the medical and surgical conditions in which dental infection is of importance.

Dental infections begin in children as early as the age of two years and perhaps even earlier. It has been estimated that 95 per cent of our 45,000,000 children have dental caries. Only too recently has this been considered as of utmost importance for it has been taken for granted that the milk teeth are doomed in a few years and as a result the public has grossly neglected their children's teeth. It is up to the medical as well as the dental profession to educate the public to the fact that a child's first teeth must be as closely watched and attended as his permanent teeth, for unless this is done a child is apt to be handicapped the rest of his life, either through conditions arising secondary to dental infections or to malocclusion of the permanent teeth.

Focal infections have received a great deal of attention in recent years. In many cases, no doubt, these various potential foci have been needlessly attacked and teeth have not escaped. But there are thousands more people with dental infections needing attention or extraction than there are those who have uselessly sacrificed valuable and irreplaceable teeth to the hands of over zealous physicians and dentists. Let us consider some of the medical conditions secondary to dental infections.

Dental infections play an important role in the infections in the abdomen. Chronic foci of infection in the abdomen are now looked upon as secondary rather than primary, and are most often secondary to infections in the head—whether teeth, tonsils or sinuses which have existed for a long time prior to the abdominal condition. This conception then, may explain many of the gallbladder, appendiceal,

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pancreatic, and even hepatic conditions. Cultures of these organs removed at surgery have been similar in every respect to those organisms found in sinuses, tonsils, teeth and other foci. Conversely; cultures of organisms taken from infected teeth have shown, experimentally, an elective affinity for the stomach and other parts of the digestive tract. Rosenow has done a large amount of experimental work along this line and was one of the first to advance the theory of organisms having an elective affinity for various parts of the body. This would explain chronic appendices, gallbladders, and ulcers as being secondary to foci of infection in the head. Of the possible foci of infections being primary to infections in the abdomen, teeth and gums are by far the most important and frequent, being second in order not even to tonsils.

One author (Andresen) listed 130 dispensary patients with one of the following conditions—Gastric ulcer, disease of the appendix or gall bladder, cancer, or diabetes. Eighty-three per cent of these 130 dispensary patients had frank pyorrhea. In a series of 55 private cases with one of the same five conditions 63 per cent of them had pyorrhea. No doubt the smaller per cent in the private patients could be accounted for by greater attention being paid to the teeth and the financial ability to consult private dentists. In 180 cases in which pyorrhea was looked for first the following principal physical conditions were found:

| Condition | No. of cases | Per cent |
|---|---|---|
| Gastric ulcer | 57 | 32% |
| Gall bladder infection | 17 | 9% |
| Appendicitis | 26 | 14% |
| Diabetes | 5 | 3% |
| Cancer | 8 | 5½% |
| Functional G.-I. Diseases | 18 | 10% |
| Pelvic Diseases | 12 | 7% |

In treating the above common diseases we should give our closest attention to the patient's teeth. It is unfair both to the physician and the patient not to have dental consultation where there is the least doubt of dental infections. True, some of the chronic infections of the abdomen show no response to clearing up foci in the teeth, but we must remember that no secondary focus is likely to clear up unless the primary focus is removed.

Foci of infection have as their most common sequelae subacute and chronic arthritis of the infectious type. Dental foci present by far the largest per cent. Pemberton lists 545 cases, with dental infection present in 295 or 54 per cent of the cases. Caries alone do not seem to be of great moment unless of extreme degree. The most serious of dental lesions in arthritic conditions are apical abscesses. Therefore, examination of the mouth in our patients complaining of arthritis should include, not only an inspection by the physician, but also a thorough examination by a competent dentist. Great injustice is apt to be done patients by a physician who assumes that the teeth are sound because no gross lesion manifests itself to him. It might be well to add that equal injustice is done by overenthusiastic and reckless advice as to removal of teeth.

When an infected tooth in one of our arthritics is removed, if circumstances permit, it would not be amiss to try to obtain a culture with the hope of isolating the infecting organism and preparing a vaccine for subsequent use should it be necessary. It is also wise to keep in mind that it is not advisable to remove too many teeth at one sitting as too severe a reaction might take place. The arthritic condition might, as a result, be so greatly aggravated that by the time the exacerbation has subsided, irreparable damage may have been done. It has been considered that exacerbation following removal of infected teeth offer an excellent prognostic sign, but we cannot place too much emphasis on this for exacerbations can take place as a result of other factors not concerned in the etiology. Let me emphasize again that no case of infectious arthritis is receiving justice at the hands of his physician unless his teeth be thoroughly examined both radiologically and technically by a dentist, and any necessary treatment carried out as soon as possible.

All of us have had patients whose chief complaints have been loss of energy, debility, loss of weight and appetite, and a general malaise. Clinically these patients show little save a low grade anemia, a slight leucopenia with relative lymphocytosis, a low neutrophil count, low blood pressure, a lowered basal metabolic rate and a subnormal temperature. Our first thought should be of foci of infection, especially above the collar line, and again we should turn to the dentist for help. Thus once more the dentist and the physician have been drawn closer together in a common interest and more than often with a resulting benefit for that all important third party—the patient.

Time does not permit me to go into detail regarding all the conditions secondary to dental infections. They are far too many to discuss, so I will enumerate briefly a few of the more important in order to impress again the relation of dental infection to medicine.

It is hardly necessary these days for an obstetrician to have to send a patient for dental consultation. Most of them know that "a tooth for every child" is not at all necessary if they keep in close contact with their dentist. But they do not know that dental infections may play an important role

in the toxemias of pregnancy and it is our duty to keep this thought in mind, and if possible never allow a focus of infection to develop in the teeth. Talbot, of Boston, subjected a series of 97 cases of toxemias of pregnancy to a thorough dental examination and claims that evidence of chronic sepsis in the teeth was found in everyone of the 97 without exception. As yet we know comparatively little concerning the etiology of the toxemias of pregnancy, but no one can doubt the feasibility of foci of infection as being a probable important factor.

Foci of infection may produce pathological conditions in the eye. In the case of dental infections this may take place either by direct continuity of tissue or by reflex irritation. Many ocular diseases have been shown to originate by an actual migration of infective microorganisms along the fibres of nerve tissue. Thus the irritation produced by diseased teeth may affect the eye by inhibition, trophic or vasomotor influence, extension of neuritis and reflex irritation, or by sympathy. One must take great care in diagnosing affections in the eye before deciding whether or not focal infection of the teeth play a part.

There is no doubt that dental infections play an important role in many cases of iritis and iridocyclitis. When these conditions are due to infected teeth and treatment of these is neglected, blindness may result through the formation of synechia with exudates in the pupils and secondary glaucoma.

Infections of the teeth may also cause inflammation of the retina, choroid, or optic nerve separately, or they may all be affected at the same time. Inflammatory affections of the choroid, retina, and optic nerve are usually followed by a considerable loss of vision, and if infected teeth are the cause and are not removed, there may be a complete loss of vision in one or both eyes. Fortunately these conditions usually affect only one eye. Occasionally the removal of infected teeth may cause an exacerbation of the ocular condition but usually there is a rapid clearing up of all ocular symptoms.

Maxillary sinusitis may be the result of dental disease. Occasionally an apical abscess may extend through the floor of the antrum and rupture. In this case there is a discharge of fetid pus from the nose with an absence of pain, while an acute primary maxillary sinusitis produces pain in the teeth. Maxillary sinusitis may also be secondary to apical abscesses where there is apparently normal osseous tissue entervening. Pain in the ears may be reflex from infections in the teeth Other possible secondary conditions are auditory neuritis with the impairment of hearing for high notes, noises in the ear, or dizziness.

Allergic manifestations are often secondary to dental infection. One case in our files is an excellent example of this. W. F. C.—male, white, age 40. Asthma of two years duration. Physical examination revealed little except a chest full of asthmatic rales, inflamed and hypertrophied tonsils, and considerable dental infection. Protein sensitization tests were negative in regard to exogenous allergens but positive to most of the bacterial group including Staphylococcus aureus, albus and citreus, and the Streptococcus group as well as pneumococcus type I, II and II, and Micrococcus catarrhalis. Removal of the tonsils gave complete relief for a short time but recurrence followed shortly. The patient was subjected to thorough dental examination, revealing apical abscesses in two of the upper molars with the anterior abscess penetrating the floor of the right antrum. Extraction of these teeth with a subsequent radical antrum on the right side caused a disappearance of all allergic manifestations with no recurrence after five years.

There are so many other clinical entities which may arise from dental infections that I shall only mention a few of them in closing.

1. Endocarditis is frequently the result of focal infection and teeth must be thoroughly studied in this condition.

2. Arterial hypertension—While we have no definite proof that dental infections play a role in the etiology of this condition, removal of focal infections is of prime importance.

3. Angina Pectoris—Although infected teeth are not the underlying cause they may so undermine the health as to cause the appearance of angina pectoris or they may precipitate the attacks.

4. Neuritis—All of us are familiar with the common types of neuritis caused by dental infection—the most severe neuritis being associated with pyorrhea alveolaris or alveolar abscesses.

5. Nephritis—This has long been considered the result of infection. Animals innoculated with strains of streptococci isolated from infected teeth of patients suffering from nephritis have almost invariably developed nephritis.

6. Thyroiditis is not uncommonly associated with focal infections in the teeth and often disappears after removal of these foci.

7. Osteomyelitis, This may follow a primary focus in the teeth.

8. Erythema Nodosum, This arises from foci of infection most commonly found in the tonsils and pus pockets about the teeth.

9. Prostatitis. This condition, while a potential focus of infection itself is usually secondary to infection elsewhere in the body and not improbably secondary to dental infections.

10. Primary purpura. Infected teeth are perhaps the most important foci of infection causing this condition.

11. Pyelitis. It is secondary to infection elsewhere in the system and again dental infections may play an important role.

Let me again say that I regret this subject was not presented as a symposium. Dental infections are so closely linked with every branch of medicine that it would have been far wiser to have had several papers written by men in the various types of practice in order to do the subject justice. Since this was not done, I have tried to stress the close relationship which should exist between the dentist and physician. I hope that whatever discussion may follow this paper will give further emphasis to the fact that no matter what our so-called specialty may be, we are all as dependent on our dental consultations as we are on our medical and surgical consultations if we have our patient's welfare at heart.

## DISCUSSION

**J. H. Fullenwider, D. D. S.:** I appreciate the opportunity of being invited to discuss this most excellent paper. Please bear in mind that I am asked merely to open the discussion, therefore my remarks will be brief so as to allow ample time for the many of you who I know will wish to enter into a more thorough discussion of the subject as presented by Dr. Stites.

I agree with the essayist that the subject of Dental Infection as Related to General Health Conditions is rather a large dose for one brief paper, however, I wish to compliment him upon the thoroughness with which he has entered into and covered the subject.

If I do not confine my remarks strictly to the paper we have heard, it is because we must agree with the statements therein. Certainly I would not care to take issue with him upon any statement be has made. Dr. Stites has outlined many points wherein it is desirable and essential to have very close relationship and co-operation between the physician and dentist. For the past decade dentists have realized the need for this co-operation and more frequent consultation to the end that our patients may receive the best possible health service.

To begin with we must take into consideration the great frequency with which caries, pyorrhea, abscesses, cysts, and other less frequent types of infection occur in the mouth. There are thirty-two teeth in the complete adult dental arch, each one of which is a potential or at least a possible seat of a focus of infection.

Dr. Stites mentioned the fact that ninetyfive per cent of our children have dental caries. May I remind you that dental caries is just as definite a disease as are other diseases which disturb children at this particular age? Too frequently we stress the fact that the child has decayed teeth instead of telling the parent that the child has diseased teeth. Caries is just the name of a disease which destroys teeth and with neglect most certainly will result in infection.

In dentistry just as you do in medicine we feel that prevention of these conditions is much more to be desired than to be forced to attempt to cure them by treatment. According to the best authorities if the expectant mother is properly fed and the child also properly fed from the date of his birth, the percentage of poorly formed teeth which easily decay and become potential sources of infection, can be greatly reduced.

In this educational work a dentist is handicapped inasmuch as he rarely sees the child before dental caries has already developed. Therefore the physician has it within his power by instructions on diet to prospective mothers and mothers to promote healthier mouth conditions in children and thereby lessen these potential seats of infection.

I agree with Dr. Stites that although there are many teeth extracted, where the patient receives little or no manifest improvement, yet there are thousands of diseased teeth that should be removed. Again prevention is the better plan. Remove these diseased teeth before systemic involvement has taken place. Relative to cases in which little or no improvement is manifested, we know this is to be looked for in cases where the original focus has remained sufficiently long for secondary foci to become firmly implanted in the tissues attacked. Best results are to be had by early removal of the original focus before sufficient changes have taken place to impair the function of the distant part attacked.

Dr. Stites' statements regarding the laboratory and clinical observations of Drs. Rorenow and Anderson of patients suffering with infections in the abdomen are most interesting. Dr. Rosenow's work especially would seem to prove that there are at least some instances of elective localization and that perhaps in the majority of these cases the original focus of infection was to be found within the oral cavity.

Our essayist speaks of the frequency with which sub-acute and chronic arthritis of the infectious type is traceable to some foci of infection within the mouth, most frequently in the form of apical abscesses. He calls attenton to the necessity of thorough mouth examination by the dentist and the injustice to the patient if the teeth are merely assumed to be free of infection simply because they look sound. These examinations should include full mouth radiographs, test for vitality of teeth, as well as a thorough clinical examination. The mere fact that the full mouth radiograph of sixteen exposures has been made is not sufficient They must be accurate reproductions of hidden conditions. If the teeth in the radiograph are too

long or too short or superimposed one upon the other, they are useless as a means of diagnosis. Neither can an accurate diagnosis of mouth conditions be made entirely from a radiographic examination.

Dr. Stites speaks of eye and maxillary sinus infections. I venture the opinion that there are few dentists and few physicians who specialize in treating these parts who have not seen these conditions improved by the removal of oral infection.

He speaks of patients whose chief complaints have been loss of energy. debility, loss of weight and appetite, and a general malaise. He lists the clinical manifestations that these patients show and suggests that the dentist might be helpful in these cases. Also I would say that the physician might be of great help to the dentist when these patients present for dental treatment.This type patient as a rule has little endurance, and should not be subjected to long dental sittings, and should be subjected to as little pain as possible. This calls for closer co-operation between physician and dentist so that we may more intelligently serve the various types of individuals.

Dr. Stites has listed many other ailments which are directly traceable in many cases to infections of the teeth and surrounding tissues. It is needless for me to consume your time by commenting on those.

Unfortunately there are some men in both professions who do not seem to believe that dental infections are dangerous to health, yet these same disbelievers would immediately treat a less potent infection elsewhere. The fact that dental infection and filthy teeth are usually hidden from public gaze tends to promote their retention, and unless the dentist and physician cooperating, impress upon our patients the necessity of freeing their mouths of infection, then we are failing in our duty to those patients. We must realize that infection is infection wherever found. That found in the jaws can be just as dangerous to the health of our patients as that found in any other part of the system. Acceptance of that fact by more physicians and dentists will work to the advantage of both professions and the public.

May I say a word about the necessity for clean mouths as a health measure? There is much thought given today to the production of pure foods. The mouth is considered almost perfect culture media for bacteria, and in even mouths which are fairly clean various types of bacteria are always present. In many mouths we find pus exuding from infections of the gums, fistulas leading from apical abscesses, and from impacted teeth. May I ask you if there is much to be gained by the consumption of pure foods and clean milk if it must pass through this portal to the stomach carrying with it most every type of disease-producing bacteria of which we have knowledge.

Gentlemen of the medical profession, we realize that we need your assistance. We need your wholehearted co-operation and more frequent consultations with you if we are to render the complete dental health service to our patients that we wish to do and that they have a right to expect of us.

We also feel that we in our professional capacity can be of service to you.

**Carl Weidner, Jr., M. D.:** I might open my discussion with a quotation from Dr. Rush:

"I have been made happy by discovering that I have only added to the observations of other physicians in pointing out the connection between the extraction of decayed and diseased teeth and the cure of general disease."

One lesson to be learned from the excellent papers this evening, which have fully covered every phase of the subject, is that we should never fail to think of the mouth as at least a potential factor in the etiology of disease, either acute or chronic. No physical examination is really complete without at least an inspection of the oral cavity. It is a good routine procedure, not only for the purpose of discovering disease of the mouth itself, but also to detect signs of general disease which are often reflected in the mouth, such as the spongy, bleeding gums of scurvy, the blue line of lead poisoning, or the mucous patches and Hutchinson teeth of syphilis.

The second lesson is that we should co-operate with the dentist in teaching people the necessity of clean mouths. In spite of the combined efforts of the medical and dental professions, dental infection is still markedly prevalent. Much of it at the present time may be the result of a lack of money, but more often it is due to simple carelessness, neglect and ignorance, together with faulty diet and lack of hygiene.

I do not believe it was the intention of either essayist to say that dental infection is always a cause of disease. It is just one of the factors that may cause disease, but that there is a definite relationship between diseases of the mouth and general disease has been recognized for years. Even before the advent of bacteriology the connection between carious teeth and rheumatism was noted. Dr. Rush treated a case in 1801, and later reported it, of rheumatism in a girl in which he suspected a carious tooth and advised its extraction, which was followed by recovery of the patient. He also called attention to the relationship between diseased teeth and the general health and cited specifically epilepsy, insanity, nervous diseases, rheumatism, dyspepsia, headache, vertigo and even mental disturbance. In 1890 an American dentist named Miller, published a book, entitled, "Micro-organisms in the human mouth and general disease caused by them," which was perhaps the first book of its kind.

As has been pointed out tonight, dental in-

fection may cause disease in almost any part of the body. Aside from the direct effect of inflamed gums, sore mouth and teeth, etc., upon digestion and nutrition, this may be brought about in several different ways: (1) by intoxication; (2) by sensitization and allergy, (3) by direct extension of the infection; (4) by metastasis; (5) by reflex irritation. We are very apt to think about the teeth when dealing with arthritis, rheumatism and neuritis—even the laity connects the teeth with such conditions—but we must not forget that the teeth may play an important part in acute infection in the abdomen and elsewhere, and I would emphasize my belief that chronic dental infection is a frequent and important cause of degenerative diseases of the heart, cardiovascular system and kidneys.

The treatment of dental infections falls principally upon the dentist; its prevention in large degree upon the doctor. Advice as to the diet of the expectant mother is important because the calcification of deciduous teeth takes place before birth. Later the Pediatrician or family doctor can do much, in the same manner for the child, to prevent tooth decay. Closer association between the two professions should result in benefit to the dentist, to the doctor and to the patient. Consultations between the dentist and the doctor will broaden the knowledge of both and help them to distinguish between causes and effects for, as Dr. Coomer has pointed out, certain conditions in the mouth are due to diseased conditions in the body. Radical opinions which have long been held by one profession or the other may be brushed aside, or at least tempered, to the end that an agreed opinion be given to the patient.

**John T. O'Rourke, D. D. S.:** The trend of thought displayed in both of these papers would seem to indicate a demand for increased cooperation between the dentist and physician. As has been pointed out, the relationship between carious teeth and the general health has been recognized for centuries, having been brought to the fore by Benjamin Rush in 1818. At that time, however, little attention was paid to it, perhaps because they did not have the advanced knowledge of pathology and bacteriology that we have today.

The subject was again emphasized by Miller in 1890 in his book on micro-organisms in the mouth and their effect upon the general health. Again very little attention was paid to it, probably because limited investigations of that time had produced very little clinical evidence as to the relationship which Miller thought existed.

Thirty-three years ago Dr. William Hunter, in an address before the British Odontological Society on the subject of oral sepsis, pointed out that there was a definite relationship between such conditions and the general health, and from that time on the dentists, at least, have paid more attention to the subject. But it took thirty-three years to arrive at our present stage of understanding of the relationship between oral infection and the general health, and we still have members of both professions who say that such relationship does not exist. Such an attitude is hardly understandable in the face of the evidence to the contrary. Of course, we know that oral sepsis is not specific in its effects, although some men always look for arthritis, others for neuritis and others for this and that.

The mouth is primarily a filthy place, with eight or ten possible sources of focal infection. We have established from clinical evidence and laboratory research in the public schools and many other places during the past thirty-three years, that there is a definite relationship between oral sepsis and general disease. We know that the children in public schools do better work when oral sepsis has been eliminated. We also know that the population in insane asylums decreases in direct proportion to the amount of dental care given to the inmates.

In the light of our present knowledge of this subject, I do not see how the modern dentist can practice his profession to the best interests of his patients without full co-operation of the physician. I do not believe it is possible to properly treat many dental ailments without calling in the physician. On the other hand, I likewise do not see how the modern medical practitioner can fail to frequently consult with the dentist in the treatment of these patients.

I believe that in the future the study of medicine will embrace a more thorough knowledge of the dental needs of the individual and, on the other hand, the dental students will be required to know more about medicine. I do not see how either can satisfactorily consult unless each knows what the other is talking about.

**Asa W. Nickell:** I have long since learned to have a great deal of respect for the dentist's drill, whether I thought very much of the dentist or not.

It is not to the cases that come to us with the diagnostic signboards and phenomena so frank that "he who runs may read" that I wish to adddress myself this evening but rather to the vaguely defined, intractable cases in which we feel that the condition may be due to the teeth, and yet after employing every diagnostic aid at our command we are unable to establish a definite diagnosis.

One thing in particular that has been the source of a great deal of annoyance to me has not been mentioned here tonight; that is so-called pulpless teeth. Upon direct inspection the teeth are apparently sound, and a clear radiogram is obtained, and in such cases it seems that the dentists are not only fully agreed as to the right course to be pursued.

Another type of case which frequently gives a negative radiogram is that in which one or more teeth have been broken off from previous

efforts at extractions. These patients will tell you that their dentist has assured them that these roots are absolutely sound. Also dentists tell us there are residual areas of bone condensation or rarefaction at the place from which the tooth has been removed; and then there are teeth that respond to the electric current and have only slight changes at the tip and along the sides when we examine the picture. That pulpless teeth which show negative radiograms constitute a large medical, as well as dental problem is convincingly shown by various workers covering the roentgenographic examination of thousands of teeth.

The astute internist when making a physical inventory for foci of infection as a cause of systemic disease often suspects the teeth as playing a stellar role. Now what are we going to do in these cases? A recent Journal of the A. M. A. discloses some interesting information and research work which is almost as interesting as a fairy tale. They reveal as I recall, that 80 or 90 per cent of adult mouths have teeth with filled root canals and about 70 per cent of these teeth show x-ray evidence of periapical infection, and it seems also that while there is no evidence of bone destruction at the time the root canals are filled, there will later develop evidence of destructive changes at the apex.

Haden, Rhoads and Dick are making valuable contributions to the literature in this line of work. One of these workers—Haden, I believe—has made bacterial counts of areas at the roots of the teeth, a neighborhood where it is potentially greatest from a disease producing standpoint. He has made quantitative cultures in deep tubes of dextrose-brain-agar of hundreds of pulpless teeth which he has considered roentgenographically negative by the technique he employed and as I recall around 45 or 50 per cent of such teeth were found to have ten or more colonies to the tube.

Cultures of several vital teeth that showed negative radiograms were taken in the same way as controls, this group showed less than 5 per cent of ten or more colonies to the tube when incubated in the same culture media. When there is such a disparity in these findings it is time for us to wake up. And bone destruction was found in several hundred of the same teeth in 60 odd per cent. Streptococci predominated in all the cultures.

Other organisms recovered from the teeth were the staphylococcus albus, gram negative bacilli and hemolytic streptococci. Therefore, in view of the results of all the quantitative cultures by these workers it seems if these findings are correct that we are justified in regarding all pulpless teeth as possible foci of infection whether they show apical changes in the roentgenograms or not. This position should be taken when we encounter systemic disease of type usually associated with focal infection.

**Adolph O. Pfingst:** There is no doubt that the study of focal infections has brought the dental and medical profession into closer relations. I have recently added to my library the English translation of the Papyrus Ebers, and Egyptian medical document which dates back to 1500 B. C. and was acquired and translated by George Ebers in 1872. In looking over this volume I was surprised to find that even in those days pulverized stone in honey, zinc and other remedies were employed in cleaning and preserving the teeth, and figs and date poultices for bringing alveolar abscesses to a head, and that proper use of the teeth was stressed.

Just as medical science made very little progress after the time of Hippocrates, 450 B. C., so did the treatment of the teeth show little signs of development until the 18th and 19th century. In the interim medicine and dentistry were largely in the hands of ecclesiastics and barbers. As far as I know the first treatise on odontology, which was the work of the great anatomist, Eustachius, appeared late in the 17th century, but it was a century later before John Hunter, Benjamin Rusk and a few others began the development of dentistry as a science and Pierre Faucherd gave the first description of pyorrhea alveolaris (1749).

It was Benjamin Rusk who first made a study of the relation of the teeth to general health, a subject which has in recent years occupied such a prominent place in medical literature. We all know now that oral sepsis leads to affections of eyes with greater frequency than it does to disease of other organs. While the first instance of the relation between the teeth and the eyes was reported in 1795 by Richter and occurred in a woman blind for several years in which a recovery of vision occurred after the extraction of an infected tooth, we are led to believe by publications of the early Christian Era that such relations were recognized in those early days. Saint Appolonia, the patron saint of dentistry, and Saint Lucia, the patron saint of the eyes, have been represented in the same picture. In early nomenclature the superior cuspids were called eye teeth, which would indicate an old belief that a close relation existed between this tooth and affections of the eye. An impetus was given the study of the teeth in regard to their relation to ocular disease by that great physician and student, Jonathon Hutchinson, who in 1865 declared that too little attention is paid to the state of the teeth as possibly productive of disturbance of function and nutrition of the eyeballs. This dictum of Hutchinson was followed by occasional case reports illustrating the association between the teeth and ocular disease but it is in comparative recent years, I would say since the advent of bacteriology, that the teeth are recognized as the most frequent seat of infectious foci. There can no longer be any doubt that oral infections cause disease of the eyes for

many cases of ocular disease due to infected teeth are being reported.

One of the speakers mentioned the extension of oral infection to the eyes by continuity of tissue. I can not subscribe to this theory. Unless the infection in the mouth reaches the orbital tissue by way of the lower nasal accessory sinuses I fail to see how the eyes can be involved directly by continuity of structures. To have the best understanding of the ocular affections due to dental origin we might divide the cases into two groups.

First—those in which irritation of the dental branch of the trigeminus due to oral pathology brings about reflex ocular neurosis through the ophthalmic division of the nerve. These are the cases of blepharo-spasm, motor paralyses, amblyopia without apparent ocular pathology, mydriasis, floating spots before the eyes (muscae volitantes) and neuralgia of the eyes. These cases nearly always occur on the side of the offending tooth. It would be too far reaching to go into detail regarding the various ocular conditions encountered but I would like to say from personal experience that many cases of spots before the eyes and cases of pain in the eyes have been relieved almost immediately by the removal of the offending teeth.

The second group represents the cases in which a definite pathology is demonstrable in the ocular structures, due to the conveyance of bacteria or bacterial products from the mouth by the medium of the blood and lymph streams to the eye. Although any part of the eye may be involved the uveal tract seems to be the site of the lesion in a large majority of the cases. Iritis, iridocyclitis, and choroiditis are now believed to be due to oral sepsis in from 25 to 30 per cent of cases. Any of us practicing ophthalmology can site many cases of rapid recovery after removal of the infectious foci.

It is now a generally accepted view that apical abscess is the kind of oral pathology that leads most frequently to eye involvement though septic fragmentary teeth and infected impacted teeth and pyorrhea pockets are undoubtedly also frequent source of infection.

Considerable controversy now exists as to the infectious nature of divitalized teeth, those in which the x-ray shows no structural changes, which are now generally spoken of as potentially dangerous teeth. The destruction of the nerve supply to a vital structure by means of which its growth and nourishment is controlled, must necessarily eventually lead to the destruction of tissue, hence, the method of devitalizing teeth has never appealed to me as a sane form of treatment and I am glad to know that such treatment is being abandoned by the dental profession. I am of the opinion that devitalized teeth are not potentially but actually dangerous. This is made apparent in that the extraction of devitalized teeth where the x-ray shows no bone changes is frequently followed by marked reactions in the parts affected in a metastatic way. It is my opinion that in the presence of serious eye diseases which appear to be the result of focal infection devitalized teeth should be sacrificed.

**Frank Pirkey:** In the practice of ophthalmology the possibility of a focal infection is one that constantly confronts us. There are a number of eye conditions which may have their origin in focal infections. One group in particular is made up of diseases of the iris, the ciliary body and the choroid. These three structures are so closely related that we group them under the term uveal body, and whether we have simply an iritis or an iridocyclitis of the entire uveal body is usually a matter of the extent and virulence of the infection. The etiological factor in such a condition may be one or more of a number of things, but in the vast majority of cases it arises from two causes, syphilis or a focal infection. In this type of case, even where there is a definite history of syphilis or a four-plus Wassermann reaction, and we can feel fairly confident that the condition arises from syphilis, still we are not doing the patient justice if we stop there. It is a much wiser and safer plan, after instituting antisyphilitic treatment, to search further for any possible focal infection, because we do occasionally meet with cases in which the syphilis seems to be merely incidental to foci of infection which may be located in various parts of the body, but by far the most frequent locations are in the teeth and tonsils, especially the teeth, which is rather fortunate because with our present methods of investigation we can obtain more definite information from examination of the teeth than we can from examination of the tonsils, gallbladder, prostate gland, or other regions of the body. We cannot always tell definitely from an examination of the tonsils whether they are diseased or not, but examination of the teeth gives us more definite and exact information.

Dr. Stites mentioned the work of Rosenow showing the selectivity of the various types of organisms for certain portions of the body. There have been other workers along the same line and while their reports vary to a certain extent they are practically unanimous in one conclusion namely, that the presence of an iritis or an iridocyclitis may mean some specific infection in the teeth. In their experimental work, when such teeth were removed and a culture made and injected into animals, 40 to 60 per cent of the injected animals developed eye symptoms, whereas, when the same procedure was followed with teeth removed from patients suffering with arthritis, only 2 or 3 per cent of the animals developed eye symptoms.

This has given us lead in regard to treatment. As a rule when we find a focal infection in the teeth or tonsils, immediately upon removal of the focus the eye symptoms begin to clear up, mark-

ed improvement being shown within forty-eight hours. In some cases brilliant results are obtained from an autogenous vaccine made from the infected tooth or tonsils.

Another eye condition in which prophylactic dentistry can be practiced to advantage is mature senile cataract. In operating on these patients the thing we are afraid of is the development of infection after operation. This is not very common but where it does develop it is quite serious. Very seldom is the infection carried into the eye through faulty operative technique; more often it develops from a focal infection elsewhere in the body. Therefore, in cataract cases I make it a rule to investigate the general health of the patient and to see that any diseased teeth are removed or taken care of before operation.

In cases of co-existing eye disease and infected teeth it does not necessarily follow that the one is dependent upon the other, but at any rate the removal of the diseased teeth will do the patient no harm even if it does not clear up the eye symptoms.

**Mischa Casper:** It has often occurred to me what a distinct advantage the city dweller has over those who live in the country from the standpoint of dental care. In nearly every case of diseased appendix, gallbladder, or other organs of the body that comes to us from the country, we find one or two or more abscessed or divitalized teeth, and it is our practice to insist upon the removal or treatment of these teeth before the patient leaves the city to return home. Before we began this practice we frequently noticed that such patients convalesced very slowly after returning home, and in many instances we were at a loss to account for it. Therefore, it has been our custom during the past several years to have such teeth taken care of before the patient returns home.

I think dentists nowadays are pretty well agreed that devitalized teeth should be removed if they are causing symptoms, but there are many who do not advise their removal if they are not causing symptoms. It seems to me, however, that purely from a prophylactic standpoint, they should be removed.

I recall that some years ago we had a combined meeting of physicians and dentists, and on that occasion one of the dental speakers, who is here tonight, took the stand that some devitalized teeth did the patient no harm, and I am interested to know whether he is still of the same opinion. Personally, I think devitalized teeth are a source of potential danger and should be removed as a prophylactic measure instead of waiting until they cause definite and perhaps serious symptoms.

**Robert L. Sprau,** (D. D. S.) I was a member of the debating team to which Dr. Casper has referred, on the affirmative that "all infected teeth should be removed." We lost principally because one of the judges, a physician did not believe in the removal of infected teeth. (The above is not said seriously.)

Dr. M. L. Ryan, who practiced both as a physician and a dentist made the statement, which I think is rather broad, that systemic diseases of all types were demonstrable in one form or another in the mouth. Possibly Dr. Ryan being skilled in both professions, was able to recognize symptoms that would escape one not skilled in this dual capacity. The statement is offered for what it may be worth.

The importance of dental care during pregnancy and its lasting effects upon the teeth has been emphasized. There are definite reasons for close co-operation between the physician and the dentist all through life. The period from the age of eleven years to sixteen years of age is the crucial period, so far as the teeth are concerned. We see child patients, beginning with the age of six or earlier, carry them through until they have discarded the baby teeth. We feel we have done a fine job to bring them through with good sound teeth. Then something happens, they do not return for observation for two or more years, and we find their teeth breaking down. I think the physician could render a splendid service during this developmental period, by advising the parents the necessity of dental attention. I recall one boy in particular who appeared to have grown at least eighteen inches during that period. The last time his mouth had been observed it was in good condition and when he returned there were no less than twenty-two cavities in his teeth. Within the next year he developed as many more.

We see cases in which the results of removal of infected teeth appear to be almost magic. During the past year I had the opportunity to observe a case where the patient had been treated for three years for an infection of the leg following a so-called milk-leg. This patient had eight abscessed teeth and twelve teeth from which pus could be forced out from around the gums. Her mouth had never been looked into. (The infection of the leg disappeared shortly after these infections were cleared up).

In conclusion I wish to again emphasize the importance of the care of the teeth during the developmental period.

**Arthur T. McCormack:** I was particularly delighted to hear both of the essayists emphasize the importance of preventive medicine and preventive dentistry. Those of us who pay particular attention to the public health recognize that the health of the individual depends in large measure upon the extent to which every physician and every dentist employs preventive as well as curative measures in every case that comes to their attention, doing the things that need to be done for the prevention of the development of future disease.

I am glad to hear the emphasis placed upon the

danger from dead teeth. I have heard Dr. Charles Mayo say, not once but on numerous occasions, that a dead tooth or a dead root was as dangerous as a stick of dynamite and should never be allowed to remain in the oral cavity under any circumstances. I think the importance of this can hardly be over-stressed.

One other point that I think is demonstrated by this meeting is that dentistry is a specialty of medicine; that there is no distinct line of differentiation between the two professions. That this fact has come to be generally recognized is, I think, due to the revelations of bacteriology. Under the agreement between the American Medical Association and the American Dental Association there can be no question that the dentist of the future will be a physician who limits his practice to oral diseases, just as others limit their practice to the eye, ear, nose and throat, and other specialties.

From the public health standpoint I want to emphasize again that we are entirely dependent for the success of our efforts upon the increasing interest of the practitioners of medicine and dentistry in the protection of the health of individuals coming under their care.

**Max M. Eble, (D. D. S.):** I have enjoyed hearing these papers which have been so well prepared and so ably presented that one can hardly disagree with anything that has been said.

One speaker in his discussion mentioned submerged teeth. I suppose by that term he means roots which have become entirely covered by the gums. I do not believe any one will say that such roots should not be removed. Perhaps some dentists do not remove them because they do not know how.

I believe we are all agreed that dead teeth should be removed, but all non-vital or pulpless teeth are not dead teeth, because after the nerve is gone from a tooth it still retains considerable vitality through the nourishment it gets from the peridental membrane. All dentists agree that infected teeth should be removed, but who can tell whether teeth that are dead are infected?

The age of the patient is a factor in determining whether a pulpless tooth should be allowed to remain. Take, for instance, an elderly individual, in perfect health, who has a non-vital or pulpless tooth. It may be very useful in aiding the retention of a mechanical appliance for the proper mastication of food.

I have often wondered whether climatic conditions have any effect upon these pulpless teeth. Immediately after graduating, I went to South America and practiced there for three years, and one thing that attracted my attention there was that about every other man had his jaws bound with a white cloth. I was told that the reason for this was that the native dentists before filling a tooth, applied arsenic to alleviate the pain. These people go around day after day and year after year with their jaws tied up but do not appear to suffer any pain. I do not know whether climate has anything to do with it or not. I was told that syphilis in that region is very mild in character.

One thing that we frequently disagree on is the reading of x-ray plates. If some one could just tell us how we can definitely tell whether or not a tooth is infected, it would be a great help. On inspection everything looks all right. Then we get an x-ray made and find some evidence of infection about a certain tooth and the patient will tell you that that tooth has never given him any trouble. Most individuals, especially young and comely women, dislike to lose teeth and they say, "Doctor, are you positive?" And that is just what we cannot be—positive. We must treat our patients as we would want to be treated, and I believe we can go too far in the direction of removing teeth at the first sign of trouble. About a year ago one of my own teeth gave me trouble and my office associate thought it should be removed. Nevertheless, I had the tooth treated and filled, and have it x-rayed every three or four months and it is still doing business at the same old stand. You would not remove a kidney just because it was giving a little trouble, and I believe we can go too far in the same direction with the teeth.

**E. C. Hume, (D. D. S.):** I wish to express my appreciation of the privilege of being here tonight and hearing these excellent papers. There are three or four outstanding points that I would like to emphasize.

I had the privilege of being at the Mayo Clinic and seeing the last five or six of the series of dogs posted upon which Rosenow conducted his experiments in connection with kidney stones. Cultures made from pus taken from infected teeth of patients having kidney stones were sealed in the teeth of dogs which had been previously subjected to x-ray and found to have no stones in their kidneys. A brother or sister from the same litter was used as a control for each dog treated. The two dogs then were placed in the same pen, fed the same food and at the end of the required period, when the animals were posted, if my memory serves me correctly, 70 per cent of the treated dogs had developed renal calculi, while only one of the control animals showed the presence of kidney stones. These findings are significant in the way of establishing the fact that there is a definite relationship between oral infections and renal calculi. We have only two kidneys and the so-called chronic recurrence of renal calculi until one or both kidneys are seriously damaged, presents an important and serious problem.

Another point to be considered in connection with so-called devitalized or pulpless teeth is this; Rosenow's experiments, embracing a large number of animals, show that the greatest reaction results from the extraction of x-ray negative devitalized teeth. In other words, extrac-

tion of teeth which have a definite membrane around the end, that we call a small abscess or cyst, produces very little reaction because the infection is encapsulated and there is very little absorption following removal of the tooth and abscess; but when a devitalized tooth is removed, where nature has not walled off the infection, there is a decided reaction, and in dealing with cases where the teeth are suspected of contributing to systemic infections, I would much rather find a tooth without an encapsulated abscess or cyst than I would one with a great big pea-like disclosed spot on the x-ray at the end of the root. All devitalized teeth are potential sources of trouble.

Cancer of the mouth presents another significant phase of the subject under discussion. It has been estimated that about 10 per cent of all cancers in the body develop around the mouth. When such men as Bloodgood and Crile say they rarely see a case of malignancy of the mouth in which diligent search has not revealed some irritating factor, such as malformation of the jaws themselves, a broken, jagged imbedded root or some other source of irritation within the mouth, we must give serious consideration to such statements. It has never been definitely established that irritation is a positive etiological factor in the development of cancer, but the presumption is that it does play an important part.

In Massachusetts a survey of chronic diseases throughout the entire state revealed the fact that the number of chronic diseases almost paralleled the number of those individuals with mouth infections, which I think, is a very significant finding in a state like Massachusetts, where educational facilities and institutions for the proper care of such individuals are among the best to be found anywhere.

**Raymond Grant, (D. D. S.):** I have certainly enjoyed both the medical and dental presentations of the subject. I might say that I also was a party to the debate on the same subject mentioned by Dr. Sprau some years ago. I think the reason we lost the debate at that time was because the subject was new and the other side was able to present the strongest arguments. It has taken us some twelve or fourteen years to be able to overcome them. I ran across a reprint of a paper which I read on this same subject many years ago, and if that paper had been presented tonight it would have been up to date.

During the last ten days I had the opportunity of seeing, at the Children's Free Hospital, a child with a condition which Dr. James W. Bruce said was a mixture of nephritis and nephrosis. I had to look up the latter term in the dictionary to find that it means enlargement of the kidney. This child had been treated at the City Hospital recurrently during the past six months and it seems that some of the dental internes at that institution overlookd a bet in not making a thorough mouth examination. Then the case came to the Children's Hospital and it was generally believed by the pediatricians there that the kidney condition was secondary to some focal infection. To be brief, upon examining that child's mouth in my office I found a discharging fistula on the second molar on the right side and pulpless teeth on the left side, which Dr. A. P. Williams removed a few days ago. It is my intention to follow up the further history of that case and see if the oral infection is really the cause of the kidney condition.

I think we all need more education along this line and if we do not get it in school we must get it in actual practice. Many things that we learned in school must be unlearned now in the light of modern developments. A great deal of emphasis has been laid upon the idea that by close cooperation the physician and the dentist can be useful to each other, but we must not lose sight of the fact that the patient's interest should be paramount to all others, so-called "profession ethics" should be relegated to the scrap heap when the patient is the sufferer thereby, what is best for the patient is always best for the physician and the dentist in the long run.

**O. B. Coomer, (D. D. S.,), (in closing):** The full discussion accorded the papers shows that we are all interested in this subject, and I believe we have derived great benefit from this meeting.

Dr. Nickell asked what to do about pulpless teeth. I wish I could tell him. Some investigators claim that often they cause no trouble, which may be true and again it may not. If we want to be absolutely certain we must take them out, regardless of the x-ray findings.

Dr. McCormack mentioned the relationship between dentistry and the public health, which opens up a very broad and important field and one that has been greatly neglected. Dr. Mayo said, several years ago, that five to ten years will be added to the span of human life when all the people have clean mouths.

Pulpless teeth has been the principal subject of discussion in dental literature and at dental meetings for many years and, while I would not belittle its importance, still I believe that more ill health is caused by other foci of infection in the mouth than by pulpless teeth. We find many more instances of infected gums from other sources than from dead teeth. It is a question, however, that will eventually solve itself because it is no longer considered advisable to destroy live teeth.

I very much appreciate the opportunity of being here tonight and discussing this subject before the Jefferson County Medical Society. I have received much inspiration and benefit especially in the way of a desire to know more about it.

# A CLINICAL CONSIDERATION OF BRAIN TUMORS*

R. Glen Spurling, M. D. and
Franklin Jelsma, M. D.

Louisville.

With the exception of the uterus, the brain is more often affected by neoplastic disorders than any other organ of the body. Tumors of the brain comprise two per cent of all neoplasms.

In general, neoplasms may be said to occur most frequently in the latter half of the normal life span. Quite in contrast to this general statement, tumors of the brain are of very common occurrence in the first and second decades of life, reach their peak in the fourth decade, and occur but rarely after the sixth decade. Most statistics indicate that there is a slight predominance in the male sex, and that there is no racial predilection to the lesion. All parts of the brain, its coverings and adnexa, are the sites of new growths. They do occur, however, about twice as frequently in the cerebral hemispheres as in the cerebellum. Of the entire group, approximately 70 per cent are benign.

There is but one symptom that is common to all tumors of the brain—a non-febrile, steadily increasing change in nervous function. The prevalent teaching that headache, vomiting, and failing vision are the cardinal signs of brain tumors must be abandoned before treatment of these lesions can attain its greatest success. These are symptoms of increased intracranial pressure no matter what the cause may be. The presence of tumor should be suspected, and often recognized, before these symptoms develop.

The term "intraeranial tumor" embraces many clinical as well as pathological entities. The relative frequency of the different types is well shown by the following table compiled from Cushing's series of 2023 verified brain tumors:

| | |
|---|---|
| 1. Gliomas | 42.6% |
| 2. Pituitary adenomas | 17.8 |
| 3. Meningiomas (dural endotheliomas) | 13.4 |
| 4. Neurinomas | 8.9 |
| 5. Congenital tumors | 5.6 |
| 6. Metastatic tumors | 4.2 |
| 7. Granulomatous tumors | 2.2 |
| 8. Blood-vessel tumors | 2% |
| 9. Sarcomas (primary) | 0.7 |
| 10. Papillomas (choroid plexus) | 0.6 |
| 11. Miscellaneous and unclassified | 2.2 |

Many of the foregoing types have been divided and subdivided according to their cellular structure. For instance, the glioma group now embraces ten well recognized pathological entities.

To approach the subject more concretely, we shall consider the clinical features of the types of tumors most frequently encountered, namely, the gliomas, the pituitary tumors, the meningiomas, the neurinomas, the congenital tumors, and the blood-vessel tumors. Then we shall show you patients whose records illustrate the clinical course of the various lesions, and whose present condition demonstrates what may be accomplished by surgical treatment.

The Gliomas: Approximately 42% of all brain tumors belong to the glioma group. Taken as a whole, they are the most unfavorable to treat of any of the intraeranial neoplasms. About 50% are highly malignant; the other 50 per cent are relatively benign. Surgical treatment of the malignant types is no more than palliative; of the relatively benign group, surgical treatment is eminently successful.

The incidence of gliomas in the first 15 years of life is almost as high as in any other similar period in the normal life span. As would be expected, it is also at this period of life that the more embryonic and, hence, the more malignant types appear. But, fortunately, approximately an equal number of relatively benign tumors goes to swell the high incidence at this age. We may say, therefore, in so far as gliomas are concerned, a child has about an even chance of having a tumor favorable for surgical removal. Gliomas occurring in childhood are most commonly encountered in the cerebellum. This is fortunate indeed, for the cerebellum, both anatomically and functionally, lends itself to surgery better than any other region of the brain.

In general, it may be stated that gliomas may be either encapsulated or non-encapsulated. The encapsulated ones cause symptoms by compression of nervous tissue, while the non-encapsulated ones destroy adjacent structures by direct invasion. Some are cystic, and a few of them become infiltrated with calcium deposits. Some types are very sensitive to irradiation, while others are completely resistant.

We have selected three examples from the relatively benign glioma group to present tonight. In the first case, the tumor arose from the cerebellum, in the second, from the wall of the third ventricle, and in the third, from the pineal gland.

Case 1. S. S. B., female, aged 4 years, was referred by Dr. George S. Coon of Louisville.

This patient came under our observation for the first time on December 1, 1932. The first symptoms noticed by the family appeared six months previously and consisted

*Read before the Jefferson County Medical Society.

of headache, nausea, and vomiting. For the next two months, she continued to have recurrent attacks of headache which were described as being severe and often associated with vomiting. Between these attacks, however, she was relatively free of symptoms.

Four months ago, her mother noticed that she staggered when she walked, and that she was awkward in handling objects. Within the course of four week, the incoordination became so marked that she was no longer able to stand alone. The hands were likewise involved to such an extent that she could not even feed herself.

At about this time she complained of failing vision. This visual loss gradually continued until now she can only see the gross outlines of objects. For the past three months, the family noticed a gradual enlargement of the head.

On examination, the patient was irritable and drowsy. Her general nutrition was still good. She could not stand alone. The head was definitely enlarged; in fact, she was unable to support it. A "cracked-pot" resonance was readily elicited by percussion. Suboccipital tenderness was present, particularly on the left side. Ophthalmoscopic examination revealed a high degree of choked disc bilaterally. The visual acuity was markedly impaired. A coarse nystagmus was observed on looking to the right or left. The left eye could not be rotated lateralward due to paralysis of the external rectus muscle. The muscles of the left side of the face were weaker than normal. All of the "smoothness" was gone from the voluntary motion of both the upper and lower extremities; each movement consisted of a series of incoordinated jerks. The laboratory data were negative.

All of these findings, both subjective and objective, pointed unmistakably to a cerebellar tumor.

Operation. A midline cerebellar exploration was performed on December 9, 1932. The convolutional markings of the vermis and of the left cerebellar hemisphere were obliterated. On incising the cerebellar cortex, a solid tumor was encountered 5 mm. below the surface. A small cyst was evacuated. The tumor itself was very large and extended forward to the roof of the fourth ventricle, laterally into the cerebellar hemispheres, and upward as far as the incisura of the tentorium. Only a small portion of the solid tumor was removed for diagnosis. Inasmuch as the gross appearance of the growth indicated that it might belong to the malignant types of gliomas, we deemed a second operative session advisable should the histological structure prove it to be a favorable growth for radical extirpation.

The child made an uneventful convalescence and was discharged 11 days later. After returning home, the symptoms largely subsided , but she was still incoordinated and had an occasional attack of vomiting. Histological study of the growth proved it to be a benign type of glioma. In view of this fact, a second operation was done on February 28, 1933. As had been expected, the tumor had shifted well out of its bed, making its removal much simpler. The entire tumor mass was removed intact. She made an uneventful convalescence from this procedure and was discharged to her home on the tenth postoperative day.

This tumor had almost completely destroyed the substance of the cerebellum by pressure. For the first two or three months after the second operation, she was still unable to walk or to feed herself because of lack of coordination. These symptoms slowly improved until at the end of six months, she was able to walk without support. She has been completely free of headache, nausea, and vomiting. At the present time, she is going to school, playing with other children of her age, and, aside from a tendency to walk on a wide base, she has made a complete recovery. Fortunately for her, the lesion was attacked before the visual mechanism had been destroyed by pressure. She now has useful eyesight for all purposes.

Case 2. M. W., female, aged 10 years, was referred by Dr. E. E. Butler and Dr. T. Cook Smith of Louisville.

This child came under our observation for the first time on May 15, 1931. Her history dates back over a period of 5 years. She has had recurrent attacks of headache and vomiting during this entire time. At first, these bouts of headache would occur every two or three months. They gradually became more frequent and more severe, and during the past year, she has scarcely been free of headache. For the past few months, the vision has failed gradually, until at the present time, the left eye is completely blind.

She has been treated on several occasions during the past year for cyclic vomiting and dehydration, considered to be of gastro-intestinal origin. In fact, two months ago, she was taken to a local hospital where treatment was directed primarily toward the gastro-intestinal tract, acidosis, and dehydration.

The headache has always been most severe in the frontal region. The vomiting, which always occurred when the headache was most severe, was not preceded by nausea but was projectile in type.

No other symptoms referable to the nervous system had been noted. In the main, therefore, her symptomatology was that of increased intracranial pressure.

The examination revealed the child to be weak, emaciated, and drowsy. She was markedly dehydrated. The left eye was totally blind. Only the outlines of gross objects were seen with the right eye. Ophthalmoscopic examination disclosed a high degree of choked discs bilaterally with secondary optic atrophy. The neurological examination was otherwise negative.

A ventriculogram performed on May 17, 1931 showed an obstruction in the region of the third ventricle, inasmuch as air could not be made to pass from one ventricle to the other. The lateral ventricles were markedly dilated.

At operation on May 17, 1931, a left frontal osteoplastic flap was made. A soft tumor was found in the region of the third ventricle. It was completely removed with the suction apparatus. Convalescence was uneventful, and she was discharged from the hospital two weeks later. The tumor was a relatively benign glioma.

Following the surgical procedure, she was treated by Dr. D. Y. Keith with x-ray. There has been no recurrence of headache, nausea, or vomiting. She has resumed her school work, but her vision is so badly impaired that it may be necessary for her to complete her education in a school for the blind. Otherwise, she has developed normally. The left eye remains blind. There has been some improvement of the vision in the right eye. With glasses she has 20/50 vision.

Case 3. O. F., male, aged 25 years, was referred by Dr. D. A. Bates of Okolona, Ky. and Dr. George A. Robertson of Louisville.

This patient came under our observation for the first time on February 12,1932. His first symptom was headache, first noticed 3 years ago. He described it as being generalized, intermittent, dull, and severe. For the past year, the headache has been an unusually prominent symptom. At times he would stay in bed for five to seven days because of the excruciating pain. These attacks have never been associated with nausea or vomiting.

During the past month, he has noticed a gradual progressive loss of vision. In the past week, his vision has failed rapidly, until now only the outlines of objects can be recognized. He has noticed no other symptoms that could be interpreted as being referable to the nervous system.

The neurological examination was entirely negative except for a high degree of choked discs bilaterally and a loss of conjugate deviation of the eyes upward. This latter sign is pathognomonic of tumors in the region of the pineal gland.

A ventriculogram revealed an advanced internal hydrocephalus with enlargement of the third ventricle. The outline of a tumor mass could be identified projecting into the third and left lateral ventricles.

At operation on March 16, 1932, a left occipito-parietal osteoplastic flap was made. The left hemisphere was retracted laterally and the corpus callosum divided longitudinally. A soft solid tumor about the size of a large English walnut was found beneath the corpus callosum. It was completely removed by suction. Histological study proved it to be a glioma arising from the pineal gland. The convalescence was stormy. He developed a complete right hemiplegia following the operation. This was due to the necessary ligation of a number of large veins extending from the cerebral hemisphere into the sagittal sinus. Also, a profound aphasia was produced. These symptoms have gradually improved. The aphasia has completely disappeared, and the hemiplegia is gradually becoming less pronounced. He has continued to be completely free of headache.

This patient is one of the few living examples of a successfully removed pineal tumor. The diagnosis and treatment of tumors arising from the pineal gland represent one of the most difficult problems of neurological surgery. They are benign growths, but due to the inaccessible location of the structure, their removal is extremely hazardous.

The symptomatology of these tumors, for the most part, is that of increased intracranial pressure. They block the circulation of cerebrospinal fluid by direct pressure upon the cerebral aqueduct or impingement upon the posterior part of the third ventricle.

Pituitary Adenomas. These tumors represent one of the most interesting groups of intracranial neoplasms. They present a combination of symptoms which commands the attention of the internist, ophthalmologist, gynecologist, endocrinologist, as well as the neurosurgeon.

There are three types of adenomas of the pituitary gland, all of which arise from the anterior lobe. There is no well-defined syndrome associated with disorders of the posterior lobe.

Clinically, the pituitary adenomas can be divided into two groups: 1. Those that produce hyperpituitarism. 2. Those that cause hypopituitarism.

Adenomas of the actively secreting cells, i e., the growth and the sex regulating cells, cause over-secretion of their respective hormones and produce characteristic syndromes. Adenomas of the growth producing cells cause the familiar picture of acromegaly or gigantism, depending upon the age of the patient. Adenomas of the sex regulating cells also develop a characteristic picture. The adenomas arising from the inactive cells produce a

hypopituitary state by compressing the active cells of the gland. In many cases, these clinical syndromes overlap, one with the other, so that a state results that can best be described as "pituitary dysfunction."

In addition to the above primary effects of the respective adenomas, the bulk of the tumor may cause symptoms by compressing contiguous structures, particularly the optic chiasm.

There is a tumor, the craniopharyngioma which, according to our classification, properly belongs with the congenital tumor, but since it has so many symptoms in common with the pituitary adenomas, it can well be mentioned at this time. It may develop within or without the sella turcica. Its symptoms result entirely from compression of the adjacent structures. It may compress the pituitary gland with a resultant hypopituitarism, or extend above the sella in the same manner as the extrasellar extension of the pituitary adenomas, causing visual impairment, disturbance of water balance, thermal changes, somnolence, or signs of increased intracranial pressure by blockage of the third ventricle.

All of the tumors of this group are relatively benign. The danger lies in their pressure effects, and if recognized early, before irreparable damage is done to the pituitary gland or to the visual mechanism, these mechanical features can be satisfactorily relieved by surgery.

We shall present two cases illustrating pituitary dysfunction. The first one is a typical case of hyperpituitarism, causing acromegaly. The second one is a congenital tumor causing hypopituitarism.

Case 4. Sister R. E., aged 60 years, was referred by Dr. W. B. Owen and Dr. Joseph Henry of Louisville.

This patient first came under our observation on July 22, 1932. Her history dates back 5 years before, when she first noticed a change in the tone of her voice. At about the same time, her facial contour began to show signs of over-growth. The nose and chin became particularly prominent. The skin became thick and dry and her hair coarse. She next noticed that her hands were enlarging, especially the tips of the fingers. The feet, likewise, began to enlarge, and it was soon necessary to procure larger shoes. Next, she noticed a prominence of the knees. A little later a very troublesome arthritis of the right knee made it appearance.

Headaches started one year ago. The pain was always in the frontal region and occasionally radiated between the temples. Shortly after the headaches developed, she noticed that her vision was failing. This visual loss gradually progressed until very little vision in the left eye remained.

Relatives and friends have noticed the remarkable change of facial contour and the gradual enlargement of her hands and feet, since the onset of symptoms 5 years ago. For the past few months, the headaches have been so severe and the loss of vision so acute that she has been forced to abandon her work as a teacher.

Examination revealed the typical changes of advanced acromegaly. There was bony and soft-tissue over-growth of the nose, chin, and the tips of the fingers and toes. The skin was coarse and dry with numerous papillary growths over the chest and neck. Ophthalmoscopic examination disclosed an advanced primary atrophy of the left disc and a moderately advanced primary atrophy of the right disc. Visual field studies showed a bitemporal hemianopsia with marked constriction of both fields of vision.

The blood pressure was 145/70. There was a moderate secondary anemia, a normal intake and output ratio, and a normal glucose tolerance test. X-ray studies disclosed a greatly enlarged sella turcica, characteristic of a pituitary tumor.

Operation at this time was declined, and a series of deep x-ray treatments was given over the pituitary gland. There was a marked reaction to the treatment with a subsequent increase of visual impairment.

She was operated upon October 1, 1932. The tumor was approached through a left frontal osteoplastic flap. The skull was at least three times its normal thickness with many bony irregularities over the inner table. When the tumor was exposed, the capsule was found to be under marked tension. There was a blue discoloration of the entire mass. On incising the capsule, about 10 c. c. of old blood were evacuated. Presumably, the x-ray treatment had precipitated a hemorrhage into the tumor. The gland itself had been almost completely destroyed by pressure. The capsule was thoroughly evacuated by suction.

The patient made an uneventful convalescence from the operation. The headaches disappeared. The vision has improved considerably. The bitemporal field defects have almost entirely disappeared. She is now able to read fine print without difficulty.

The acromegalic changes that have occurred in the bones and soft-tissues are permanent. However, the skin is not so dry and coarse as formerly, and the arthritic changes in the knee joints have shown a great improvement.

Case 5. D. E., female, aged 17 years, was referred by Dr. M. C. Baker of Louisville.

During infancy and early childhood, the patient had been well and mentally alert.

She was well nourished, yet decidedly underdeveloped. The skin was thin and hairless. In 1925, when 9 years of age, frontal headaches developed. She vomited frequently. Vision in the left eye became impaired, and glasses were fitted at this time. Her condition gradually grew worse. Her gait became unsteady. Somnolence deepened into a stupor, and it was not until 1927 that she again became mentally alert. The headaches diminished and the vomiting ceased. She returned to school and was advanced rapidly. It was necessary to change her glasses frequently, and except for the slowly developing visual impairment and the cessation of growth, the symptoms had abated. She remained in a preadolescent state physically. Menses have never occurred.

Since August 1932, her vision rapidly failed; the frontal bitemporal headaches increased, and she became drowsy.

She was first seen by us in February 1933. Physically she resembled a well nourished child of about 9 years (although actually 17 years of age). Secondary sex characteristics had not developed. The skin was thin, dry, and hairless. Anosmia was incomplete on the right and complete on the left side. There was complete primary optic atrophy of the left disc with only a faint perception of light. The right disc was pale. The patient could hardly see enough to get about. With the aid of glasses, a perimetric field of the right eye could be taken. This showed a moderate constriction of the entire field, with a marked temporal field defect.

At operation, a left frontal osteoplastic flap was made. A large bluish green mass bulged from beneath and behind the optic chiasm. A needle was inserted and approximately 40 c. c. of yellow syrupy fluid, rich in cholesterin crystals, were aspirated. The cyst wall was incised. Three of four scoops of solid tumor were removed with a pituitary spoon. Small portions of the cyst wall were removed. No attempt was made to remove the entire cyst wall, but, instead, the cystic cavity was fixed with Zenker's solution and preparation for closure made. The patient left the table in good condition and made an uneventful convalescence. She left the hospital on the tenth postoperative day.

The headaches were completely relieved by the release of intracranial pressure and have not recurred since the day of operation. Vision in the right eye improved rapidly. The temporal field defect of the right field of vision had greatly improved by June 6, 1933, about 3 months after the operation. By September 1, 1933, the defect had completely disappeared. The patient had gained 6 pounds in weight and had grown 3 cm. in height. She has subsequently returned to school, is able to see, and is carrying on with her studies with decided improvement. The left eye remains blind.

Meningiomas: This group of tumors is not uncommon, representing about 10 per cent of all intracranial tumors. They occur most frequently in middle-aged persons. They vary considerably in their location, rapidity of growth, and tendency to recur after operative removal. However, they are all essentially alike in that they arise from the arachnoidal granulations and grow slowly. During growth, these tumors project into the layers of the dura, and this structure soon becomes incorporated in the growth. For this reason, these neoplasms have often been called "dural endotheliomas." In their typical form, meningiomas are firm, encapsulated masses which do not invade the nervous tissue but slowly compress it.

The presence of a meningioma may be detected with certainty in many instances by x-ray examination. Exostoses of the skull, or an increase in the arterial markings on the inner table may point unmistakably to an underlying meningioma. At other times, no clear-cut evidences of its presence are apparent. Since these tumors so often involve the frontal lobes of the brain, they are not infrequently demonstrated for the first time at the postmortem table in institutions for the insane. Unless it is placed in one of the silent areas of the brain, a meningioma causes, sooner or later, signs and symptoms peculiar to disease of the region involved. When they occur in the region of the motor cortex, convulsions and eventually paralysis may precede by years the development of pressure symptoms.

Case 6. J. K., female, aged 35 years, was referred by Dr. C. R. Petty, of Lynch.

This patient first came under our observation on March 23, 1933. Her history dates back over a period of three years when she first noticed a rather sudden complete loss of the sense of smell. Headaches first made their appearance one year ago. In the beginning, they were relatively mild, but severity and frequency of the headaches rapidly increased. She was subject to recurrent attacks of vomiting, particularly when the headache was most severe. The vomiting was of the projectile type. Six months ago she noticed that her vision was blurred. The visual loss was greater in the left eye. Her family have noticed that she is careless in her habits, and drowsy most of the time. She has shown marked impairment of memory and concentration. There have been no other symptoms referable to the nervous system.

On examination, the patient was oriented, but apathetic and drowsy. Any movement of her body caused severe headache. She was

blind in the left eye and was able only to distinguish the outlines of gross objects with her right eye. There was a bilateral loss of smell. There was a high degree of choked discs in both eyes with considerable secondary atrophy in the left eye. Both pupils were widely dilated. She was moderately dehydrated and emaciated from vomiting.

X-rays of the skull disclosed an osteoma in the region of the cribriform plate. Such a finding is characteristic of a meningioma arising from the floor of the skull in this region.

The usual operative procedure employed for removing a meningioma of this sort consists of reflecting a large right frontal osteoplastic flap and attacking the tumor from beneath the surface of the frontal lobe. Such a course was followed in this case. When the frontal lobe was elevated, it became evident immediately that the tumor was so large its removal in this manner would be impossible. In order to secure adequate exposure, the entire right prefrontal lobe was amputated. This gave an adequate exposure of the tumor. The operation was abandoned at this point with the hopes of completing the removal of the tumor at a later date. To make a long story short, it was necessary to subject this patient to three separate operative procedures before the tumor was finally removed. She made an uneventful convalescence in each instance.

She has been thoroughly studied by Dr. Spafford Ackerly and his associates to determine whether or not amputation of the right frontal lobe produces any changes in the mentality. After a time-consuming study, they revealed that in so far as they are able to determine, there has been no alteration in the mental activity of this patient.

The tumor was a very large one, the specimen weighing 150 grams. It was a benign meningioma, and there should be little or no likelihood of a recurrence of the growth.

Acoustic Neurinomas: This group of tumors is, likewise, not uncommon. They represent about 9 per cent of all intracranial neoplasms. The clinical signs and symptoms develop in a definite chronological order. This type of tumor should be diagnosed more accurately than any of the other types.

In every case, the clinical history dates back over a period of five to ten years. The first symptom is ringing in the ear (tinnitus) accompanied or followed by a gradual, progressive deafness on the affected side. These two symptoms may be the only complaints for many years. Sooner or later new symptoms develop which are due to pressure upon other cranial nerves in the immediate vicinity and upon the medulla, pons, and cerebellum. Numbness of the same side of the face from involvement of the fifth cranial nerve, and paralysis of the facial muscles of the same side, due to pressure upon the seventh nerve, are present to some degree in the course of most cases of acoustic neurinoma. As growth extends downward toward the medulla, the ninth, tenth and eleventh cranial nerves may be irritated or paralyzed, causing impairment of speech and swallowing. From extension of the growth mesially, the cerebellum becomes compressed, and evidence of incoordination and unsteadiness of gait will appear. During the period of development of the above symptoms, blockage of the cerebrospinal fluid circulation may occur in consequence of which headache, nausea, and vomiting appear.

These tumors are firm, encapsulated growths, which arise from the distal end of the auditory nerve. They grow slowly and are benign. Histologically, they are identical with the neuro-fibromata occurring on peripheral nerves.

Complete removal of acoustic nerve tumors, especially if they are large and have compressed the medullary structures, is extremely hazardous. An intracapsular enucleation of the growth will, in the majority of instances, relieve the symptoms for many years. Such a procedure may be done with a minimum of risk to life and with a result that is highly satisfactory.

Case 7. O. D., male, aged 22 years, was referred by Dr. L. P. Molloy of Paducah.

This patient was first seen by us on June 25, 1932. The first symptom noticed by the patient was noises in the right ear starting five years ago. These noises were described as roaring, buzzing sounds. Shortly after the onset of the tinnitus, a gradual progressive deafness developed in the right ear. There were no other symptoms referable to the nervous system until 9 months ago when he noticed that his gait was unsteady. There was a tendency to veer toward the right when walking. Four months ago, a severe headache developed while patient was out hunting. He became so incoordinated that he fell and had to be carried home. This bout of headache persisted, and nausea and vomiting soon followed. Double vision was noted a little later. He was taken to a physician who made a diagnosis of mastoiditis. Several days later, a mastoidectomy was performed. He continued to be bedridden from headache, vomiting, dizziness, unsteadiness of gait, and general weakness. His vision became progressively worse, and at the time he was brought to Louisville for an examination, he was almost completely blind. There was only light perception in either eye.

An examination disclosed the patient to be dehydrated, emaciated, and practically blind. The right ear was deaf. The left ear was normal. There was marked suboccipital ten-

derness on the right side. There were advanced choked discs with secondary atrophy in both eyes. Many old and new retinal hemorrhages were observed. There was a well sustained nystagmus when looking toward the right or left. There was complete paralysis of the right external rectus muscle, causing inward rotation of the right eye. There was marked incoordination of both the upper and lower extremities. He was unable to stand alone. There was numbness of the right side of the face with absence of the right corneal reflex. All of the facial muscles on the right side were partially paralyzed.

It was necessary to delay the operation for three days in order to improve the general condition of the patient.

Operation was performed on June 28, 1932. A large tumor about the size of a lemon was uncovered in the right cerebellopontine angle. A small cyst was evacuated in the wall of the tumor. The growth was very firm and hard and had eroded the floor of the skull in the region of the internal auditory meatus. A thorough intracapsular enucleation was made with the electrosurgical unit. No attempt was made to dissect the capsule free, but the interior of the capsule was carefully cauterized with the electrosurgical unit and Zenker's solution.

The patient made an uneventful convalescence from the operation. His vision has gradually improved to the point where he can see sufficiently well to walk around.

This young man was a school teacher by occupation. His sight is now so badly damaged that it is impossible for him to read small print. He contemplates entering a school for the blind with the hopes of later becoming a teacher of blind children.

Blood-vessel Tumors: This group of tumors is relatively uncommon, representing only 2 per cent of all intracranial neoplasms. They are composed either of fully formed blood-vessels or of cellular elements of blood-vessels. The former are called angiomas, either capillary, venous, or arterial, and probably represent vascular malformations. The latter are true neoplasms of cellular elements derived from blood-vessels.

In 1926, Lindau, a Swedish pathologist, while studying cerebellar cysts, found that some of them had in their walls hemangiomatous nodules. He also found that the hemangiomatous cysts of the cerebellum were often associated with angiomatous formations in the retina. Since that time, the term "Lindau's disease" has been applied to lesions of this character.

The patient whom we shall demonstrate next is an example of this disease.

Case 8. M. C., female, aged 22 years, was referred by Dr. I. A. Arnold of Louisville.

This patient first came under our observation on August 30, 1928. Her history dates back over a period of ten years. The first symptom so far as the patient is aware was headache which at first was mild and occurred at irregular intervals. A disturbance of gait and dizziness were noticed shortly after the onset of the headaches. Four years ago the headaches became more frequent and more severe. At that time she noticed double vision with a gradual loss of visual acuity. During the past year, the vision had become so badly involved that she was only able to read large print. For the past three or four years, there has been a gradual increase in the incoordination. At first, she was able to get about with a cane, but for the past year, she has been bedridden, being totally incapable of walking or standing without support. For several years the family have noticed that her speech was thick and slurring. For the past several months, the left arm has felt numb and weak. Irregular attacks of vomiting have occurred for the past few months.

The menses started at the age of 15 years and were regular for two years; then they became irregular, occurring not oftener than every six weeks.

For the past nine months, she has had difficulty in swallowing.

On examination, the patient was well developed, still well nourished, and mentally clear. There was marked sub-occipital tenderness. She was unable to walk because of incoordination, falling first to one side and then to the other. She had difficulty in reading moderate sized print at close range. Ophthalmoscopic examination showed a marked secondary optic atrophy with bilateral choked discs still remaining. Many hemorrhages were noticed in both retinae. There was a well sustained nystagmus on looking to the right or left. The left external rectus muscle was weak. There was slight weakness of the facial muscles on the left side. There was marked incoordination of movements of the upper and lower extremities, more marked on the left side.

A cerebellar exploration was performed on September 1, 1928. A large cystic mass with a distinct greenish appearance was uncovered in the midline of the cerebellum. The wall of the cyst was thin and friable. Approximately 2 ounces of thick greenish fluid were removed. A nodule about the size of a hen's egg lay within the cystic cavity. After the cyst was evacuated, an attempt was made to dislodge the nodule in its wall. Whenever traction was made upon it, the respiratory rate would become markedly depressed. Finally, after repeated attempts at manipulation, the cyst wall and nodule were removed while artificial respiration was applied by the anes-

thetist. After the tumor mass had been completely removed, respiratory stimulants and artificial respiration were necessary for several minutes. The convalescence was stormy. She was discharged from the hospital after four weeks free of symptoms.

There had occurred in this case an extensive destruction of cerebellar tissue. After removal of the tumor, the patient continued to be markedly incoordinated for several months. The headaches, however, had completely disappeared and have not recurred. She gradually learned to walk, and for the past five years has been able to walk with but little difficulty, ride horseback, sew, and do embroidery work. In fact, she has been able to resume all of the usual household duties which she has been accustomed to performing. Her eyesight, while it has shown a marked improvement, is still badly impaired.

Congenital Tumors: Congenital tumors of the brain are relatively few in number. This group is made up of the craniopharyngiomas, cholesteatomas, dermoids, chordomas, teratomas, and cysts of the septum pellucidum (fifth ventricle cysts).

The patient which we shall show from this group was the victim of the congenital abnormality known as a fifth ventricle cyst.

Lesions of this type have been recognized during life only since Dandy's description of the condition in January, 1931. However, anatomists and pathologists have noted these malformations for many years but attached no clinical importance to them.

Under normal conditions, the septum pellucidum is a thin, vertical partition, separating the two lateral ventricles. It is formed by two layers of cortical tissue that have completely fused. Each of these layers represents the mesial wall of the lateral ventricle. Maldevelopment of this structure results in incomplete fusion with cavity formation between the two layers of the septum. When this cavity becomes distended with fluid, it may interfere with the exit of cerebrospinal fluid from the lateral ventricles—a condition known clinically as a cyst of the fifth ventricle.

Case 9. J. G., male, aged 25 years, was referred by Dr. Walter Dean of Louisville.

This patient came under our observation for the first time on November 24, 1930. His first symptoms occurred 10 days before when, while at work, he noticed that his vision was blurred. When he would close one eye and then the other, he discovered that he was unable to read with the right eye. Three days later, he was totally blind in the right eye. During the week preceding the loss of vision, he had repeated transient attacks of double vision. These were his only complaints.

On examination, the only positive finding was a high degree of choked disc in the right eye. The left eye was normal. A spinal puncture was done for purposes of diagnosis. The pressure was normal, and there were 20 cells and two plus globulin in the fluid. The spinal fluid and blood Wassermanns were negative. Five days later, the symptoms had improved to such an extent that he returned to work. Five months later, he again quit work because of impairment of vision. At this time the left eye was more affected than the right eye. The only positive findings at this time were: bilateral choked discs of moderate degree with marked constriction of the visual fields. For the first time, he complained of headache which was not severe at this time, however. The headache gradually became more prominent and the loss of vision progressed rapidly.

On March 31, 1931, a ventriculogram was performed. These studies demonstrated moderate dilatation of both lateral ventricles with marked separation of their anterior horns. This finding was characteristic of a cyst or tumor arising between the cerebral hemispheres.

Operation was performed a few days later through a left parietal osteoplastic flap. The left hemisphere was retracted lateralward after ligating the large veins that emptied into the sagittal sinus. The corpus callosum was split longitudinally. A large cyst containing about 4 ounces of fluid was encountered just beneath the corpus callosum. The walls of the cyst were thin and glistening. An opening was made through the wall of the cyst into each lateral ventricle, thus providing a means of escape of the cystic fluid into the ventricles.

The convalescence was uneventful. There was a temporary aphasia and a hemiplegia on the right side. For the first week he could only understand the simplest words and phrases. These symptoms gradually improved, and vision slowly returned. After three months, all of the symptoms had disappeared except those referable to the damaged eyesight. He was able to return to work after a few months and has been employed ever since.

## Summary

1. From the standpoint of tissue histology, 70 per cent of intracranial tumors are relatively benign. This statement is not meant to imply that 70 per cent of all patients with intracranial tumors are capable of being cured by surgery. Even a benign tumor located in a vital part of the brain may completely thwart surgical efforts. Fortunately, inaccessible locations are growing more and more infrequent with the development of new technical methods.

2. In reviewing the cases that have been presented this evening, it is self-evident that the chief disability remaining after the removal of these tumors has been permanent damage to vision. This disability can be avoided by earlier diagnosis.

3. Early symptoms of brain tumor are due to disturbance of normal functional activity of that portion of the brain immediately adjacent to the lesion. Symptoms often point unmistakably to the site. Signs, in many cases, demonstrate beyond doubt the location of the lesion.

4. Late symptoms of brain tumor are secondary manifestations caused by increased intracranial pressure. They are headache, nausea, vomiting, and visual changes in the majority of instances.

5. The most satisfactory results can be obtained in those cases which have been recognized early, before the late symptoms have caused general physical debility with visual impairment, and before the adjacent brain structures have been irreparably damaged by the growth.

## DISCUSSION

**John J. Moren:** This subject is perhaps more interesting to me than to some of the other members present because, looking backward forty years and recalling how brain tumors were handled at that time and then hearing the scientific exposition of modern methods presented here tonight, I can better appreciate the width of the gulf that has been bridged during that time. I recall distinctly that, in those days, in the presence of a diagnosis of brain tumor, we were absolutely helpless. Surgery offered very little. My memory retains a vivid picture of a poor creature sitting on the curbstone on a local corner wrestling with an awful headache. His trouble had been diagnosed as a brain tumor which could not be localized. Consequently, nothing could be done for him and he was allowed to suffer out the short period of life remaining to him with no help at all.

In looking up the subject of brain tumor in my original text-books, I noted the statement that only 5 per cent of cases were considered to be operable at that time. The types of brain tumors listed were glioma, sarcoma, tuberculoma and pituitary—a very limited classification as compared with that of today. However, the neuroma and meningioma of today's classification were put under the head of sarcoma at that time, but were not considered operable.

As time went on the percentage of operable cases increased and in 1913, Dr. Starr—a splendid neurologist of whom it was said that he might have been an outstanding neuro-surgeon—demonstrated by autopsy and operation that 20 per cent of brain tumors could be removed. That percentage has gradually increased and we have seen demonstrated here tonight that it is possible to go into almost any portion of the brain and remove these tumors. That this is possible is, I think, principally due to the work of Dr. Cushing and to electricity, both in the form of x-rays and electro-surgical instruments.

One of the first recorded operations for brain tumor was by Bennett and Golden in 1884. They apparently located the tumor in the cortical area of the brain, but upon operating no tumor was found there. However, they had the nerve to make an incision through the cortex and subcortically they found and removed a typical glioma. In the report of this case the statement was made that hemorrhage was controlled by means of galvano-cautery, and it was interesting to me to know that galvano-cautery was used in 1884.

Following this report the number of brain operations greatly increased, with a mortality rate running as high as 50 per cent. In 1898, Bergman reported a series of 200 cases with a mortality of more than 30 per cent. This put a damper on brain operations for a while. Then Jackson and Horsley became active along this line and brain operations began to be more and more successful.

It has always been said that England is the home of neurology, the best work in neurology having been done in that country. Several years before the beginning of the World War, Cushing's wonderful investigations and studies gave us a new conception of the possibilities of brain surgery. Then the War began and the many head injuries encountered led to the formation of neurosurgical classes out of which developed the neuro-surgeon of today and the diagnostic and surgical technique which we have seen demonstrated here tonight. Without the aid of the x-rays, accurate diagnosis would be impossible in many of these cases. Ventriculography and encephalography are also valuable aids.

As far as symptomatology is concerned, very few symptoms have been added to the list as we knew it in 1890, but much progress has been made in the correlation and interpretation of those symptoms. In many of these cases it is impossible to make early diagnosis because of the total lack of symptoms, and often when the symptoms do become manifest they develop very rapidly. Dana, in 1894, said that the duration of onset in these cases was anywhere from 2 to 18 months. Intracranial pressure may develop within a very short time, with no previous symptoms which would lead one to suspect the existence of a brain tumor.

I have only one criticism to offer and that is in connection with ventriculography and encephalography. These tell a wonderful story sometimes but the question is, are they used too often in improperly selected cases? In other words, it is the abuse of a good thing and not the use of it that is to be deplored. I

have in mind an individual who was a frank neurotic and psychotic on whom a ventriculogram was done, with what result I do not know, but to my mind the interpretation of functional nervous manifestations would hardly justify subjecting the individual to a ventriculography or encephalography.

As to removal of the frontal lobe, Dr. Ferrier in 1884 made the statement that removal of the frontal lobe caused no mental deficiency.

**W. E. Gardner:** After having had several years of experience in clinical psychiatry I came to the conclusion that an individual practicing psychiatry ought to have a working knowledge of neurology. For that reason I began an intensive study of organic neurology, and fifteen years ago I had the pleasure of teaching that subject to junior medical students at the same time I was teaching psychiatry to the seniors.

A knowledge of neurology will in many instances prevent the psychiatrist from overlooking organic lesions in his psychiatric patients. Brain tumor is a relatively rare cause of insanity, but we do frequently see a temporary confusional state as a result of increased intracranial pressure.

Dr. Spurling has shown us that the frontal lobe can be removed without impairment of mental function and that fact would seem to contradict the alleged personality changes associated with frontal lobe tumor, unless it is possible that a tumor will produce symptoms while complete removal of the frontal lobe will not.

A relatively high percentage of brain tumors are of the benign type, yet a benign growth may in course of time become malignant in its effect as a result of increased intracranial pressure. Focal symptoms are always important in the diagnosis but often they are not of much value in localizing the tumor because of the fact that the increased intracranial pressure may be transmitted to distant parts of the brain and thus give rise to focal symptoms that may prove misleading. In such cases ventriculography may be of great value but should be used with caution. I have been interested in ventriculography since it came into use some years ago, and had the pleasure of seeing Dr. Ray Ellers, at that time resident in surgery at the City Hospital, make several demonstrations.

In this connection, I think the medical profession of Louisville and adjacent communities has been particularly fortunate in having had for a number of years past the advantage of association with men who have been especially interested in brain surgery and who have done highly creditable work in that line, which might be said to have created a receptive attitude on the part of the local profession to brain surgery, thus preparing the soil, so to speak, for the work of Dr. Spurling and his associates. It has been stimulating to watch the progress of their work and gratifying to note the extent to which it has been supported by the profession of this community and throughout the State.

The demonstration tonight would indicate a very high percentage of recoveries from operations for brain tumor. Dr. Spurling in his closing discussion might tell us how it compares with general statistics in these cases.

Dr. Moren spoke of the wonderful improvement in technique in brain operations. Neurologists today recognize that the brain will stand a great deal more manipulation than was considered possible years ago, and that even where certain areas have been destroyed by brain tumor, as a result of pressure or actual invasion of tissue, there is a compensatory process by which other portions of the brain assume and carry on the function of the destroyed portion. Wonderful advances have also been made in the control of hemorrhage in brain surgery. All of these things have gone far towards overcoming our former hesitancy to advise an exploratory osteoplastic flap, which is often the only means of making an accurate diagnosis in doubtful cases.

Going back to the question of brain tumor as a cause of insanity, statistics show that gross brain lesions, including Huntington's chorea, brain tumors, brain abscesses and local lesions from cerebral thrombosis and cerebral hemorrhage, account for about 2 per cent of cases of insanity, and if we eliminate all other gross brain lesion it is estimated that about .2 per cent of cases of insanity are caused by brain tumors. Brain tumors may exist for several months, or even several years, without giving rise to any localizating symptoms, not even changes in the disc. On the other hand, choked disc or papilloedema may be the outstanding single symptom of brain tumor, particularly in cases involving the third ventricle with obstruction of the circulation of the spinal fluid. In pituitary tumors optic atrophy rather than papilloedema is sometimes the only sign. Choked disc occurs in 65 to 80 per cent of cases of brain tumor. We sometimes see choked disc in meningitis and more rarely in encephalitis, but in about 90 per cent of cases choked disc indicates the presence of a brain tumor.

Of course, the neurosurgeon becomes more or less expert in the use of the ophthalmoscope and is perhaps justified in relying upon his own interpretation of disc changes. At the same time, I think it is the part of wisdom to call in the ophthalmologist occasionally to aid in differentiating, especially in cases bordering on papilloedema. Likewise, I think the neurologist should be more frequently consulted. In one section of his paper, Dr. Jelsma said that these cases tax the ingenuity of the internist, the ophthalmologist, the gynecologist and the endocrinologist as well as the neurosurgeon, but he failed to include the neurologist. Sometimes in a close study of a given case the sense of perspective is

lost, and the viewpoint of a neurologist might help to clear up the situation. The greatest incidence of brain tumor is about the age of 45 which is also the age at which we see the early focal signs of arteriosclerosis and cerebrospinal syphilis, and it is important to bear these things in mind in the presence of focal symptoms of undetermined origin. It has been my privilege in several cases of cerebral arteriosclerosis, syphilis of the nervous system and multiple sclerosis to have held the neurosurgeon back until further studies could be made, and in some instances it has been demonstrated that brain tumor did not exist and that some other lesion was responsible for the focal symptoms manifested.

It has been a great pleasure to me to have witnessed this demonstration by Dr. Spurling and Dr. Jelsma, whose abilities in this line of work are beyond question.

**Joseph D. Heitger:** The most important lesson to be learned from this impressive demonstration is that brain tumors can and should be detected earlier than they usually are. During the past two years I have been associated with the Los Angeles General Hospital and I would like to give you an idea of what routine brain studies in the hospital can produce.

In 1921 they were picking up two or three cases of brain tumor each year. About that time a department of neuro-surgery was established and in 1927 a resident interne, an excellent neurosurgeon was taken into the hospital. During his first year he was able to pick up 35 cases of brain tumor and in subsequent years that ratio has progressively increased.

Hospital autopsy records show that between .2 and 1.8 per cent of individuals autopsied have brain tumors. Applying the lowest percentage, .2 per cent, to the 120 millions of people comprising the population of this country gives us a figure of 240,000, which is most conservative. Using 25 years as a generation we have a total of 4,800 brain tumors occurring in this country each year. As Dr. Spurling and Dr. Jelsma have so clearly shown, in order for the neurosurgeon to have a chance in these cases the diagnosis must be made early. They are to be congratulated upon the results obtained and the men who recognized the possibility of brain tumors in these individuals and sent them to the neurosurgeon are to be equally congratulated. If more of us were included in this second category, it would result in greater honor to the medical profession in general.

**M. C. Baker:** My remarks will be directed principally to the second group mentioned by the essayists, namely, pituitary tumors. It has been my good fortune to have referred three such cases to Dr. Spurling and Dr. Jelsma, and so far they are batting 100 per cent, all three patients being alive and well. These three cases illustrated the three types of pituitary tumors described by the essayists, one of hyper-pituitarism, one of hypo-pituitarism and one of dysfunction. Two of these cases, one of acromegaly and one of Cretinism, have been shown here tonight. The other case, one of marked pituitary dysfunction, was not shown.

The most delightful outcome of surgical procedure in all of these cases was the return of vision. Sister R. E. at the time of her last refraction had a vision of 20-25 in each eye, whereas it had previously been reduced to something like 20-100 in one eye and the other was practically blind. She says the acromegalic enlargement of the joints and extremities means nothing to her compared to the return of vision which has enabled her to continue her useful work in the community.

In the 17-year-old girl, vision has returned to 20-25 plus. Central vision was the first to show improvement and then gradually the entire field of vision improved.

Dr. Gardner in his discussion mentioned primary optic atrophy. In none of the three cases mentioned was there any evidence of papilloedema or choked disc; in all of them primary optic atrophy was the first symptom noted in the eye.

**R. G. Spurling and F. Jelsma,** (in closing): There are two points which I should like to mention in closing the discussion.

First, as regards air studies: Like almost every other new procedure, air studies have been abused. The neurologist and neurosurgeon who depend solely upon ventriculography or encephalography to make his diagnosis is surely to get into trouble. Diagnoses should, in the majority of cases, be made from a careful clinical study. The laboratory information acts only as a supplement to such a study. In our own work, we use air studies only in those cases which it is impossible to arrive at an accurate localizing clinical diagnosis. Certainly, we do not employ air studies in more than twenty-five per cent of our cases. Air studies are dangerous to the patient's life even when thoughtfully applied. This is particularly true if there exists a high degree of increased intracranial pressure.

Second, as to mortality statistics: We had hoped to be able to include in this paper an analysis of our mortality statistics covering the past eight years. However, we still find our statistics incomplete. We feel safe in saying however, that our operative mortality rate during the past forty years has not exceeded ten per cent. In fact, it will probably be nearer eight per cent.

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**Waterhouse-Friderichsen Syndrome.** — Glanzmann considers massive hemorrhage in both suprarenals, discovered in the course of postmortem examination, the most characteristic sign of the Waterhouse-Friderichsen syndrome. In the last few hours before death, the symmetrical apoplexy of the suprarenals is accompanied by an extensive cutaneous purpura.

# THE DIAGNOSIS OF HYPERTHYROIDISM*

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Henderson.

It is quite impossible to discuss a subject as extensive as hyperthyroidism in a paper of this kind. I will therefore limit myself to those general phases of the subject which are important to a thorough understanding of this disease without becoming too elaborately involved in the theory of the disease or its pathology although an understanding of the fundamentals of the pathology involved is indispensable in a paper of this kind. I lay no claim to the originality of this paper. However, it is a composite of my own observations over a period of years on a very large number of patients plus the teachings of my former chief, Dr. Emil Goetsch, and of considerable individual reading which anyone is bound to do who is intensely interested in a particular disease. The description of the pathology will be reduced to the simplest terms and is perhaps at variance in a few details with some well known authors yet it is simple and direct which, after all, is important if we do not care to become lost in a mass of confusing details, argument and theory.

Hyperthyroidism is a variable disease and is said to exist when there is an excess of secretion of the thyroid gland in the circulating body fluids yet the pathology may apparently remain constant while we have clinical evidence of remission. This feature in particular makes the subject extremely interesting and in many instances confusing.

It would be well to consider briefly the chief types of thyroid pathology which one will observe in a large number of cases. Beginning with simple thyroid changes seen in the mild types of hyperactivity with moderate gross enlargement of the gland. Many of this type go on to spontaneous recovery after running a comparatively mild course, as in girls from puberty to the early twenties, while some may continue in a more or less chronic form, yet others may go on to very serious degrees of hyperthyroidism. This is the simplest form of thyroid hyperplasia and is known under the term of puberty hyperplasia. In this type of gland there is a moderate decrease in the amount of colloid present, a moderate increase in the size of the cells and moderate alveolor infolding.

The next type of hyperplasia is of a much more serious nature, the exophthalmic type. Graves' disease or Basedow's disease. Here we have exophthalmos, enlargement of the thyroid, with thrills and bruit over the gland and poles, tremor asthenia, loss of weight and tachycardia. This gland is firm and has a lobulated or granular feel. The thrills and bruit indicate increased vascularity and activity which is not confined to the gland alone but extends to the surrounding tissues including even the vessels of the skin and is often, in more severe cases, accompanied by great throbbing of the neck vessels. On section the diagnosis can be made at a glance. The gland will show almost total lack of colloid content with marked increase in the size of the cells and marked infolding of the alveolor wall.

These first two types are examples of hyperplasia occurring in the cells bounding the acini. The first is known as puberty hyperplasia, the second exophthalmic goitre.

The third and common type of thyroid pathology which we will discuss is the adenomatous type. These are true encapsulated tumors arising in the interstitial cells of the gland. They vary greatly in size from a pin head up to large tumor masses which obstruct the trachea. They may be single or multiple. The large ones often undergo cystic changes and may by pressure destroy what little normal thyroid tissue is left. In removing these large cystic tumors it is always necessary to explore the remaining thyroid tissue as they are often multiple with the offending nodule which is the cause of the hyperthyroidism tucked away behind the superior pole of the gland and quite out of sight if one is content to merely excise the innocuous cyst which is perhaps causing no symptoms but is unsightly or has been causing pressure symptoms. To remove only the large cystic tumor in these cases would leave the patient with her hyperthyroidism uncured. This is the asymmetrical nodular type of gland producing mild tachycardia and moderate loss of weight with absence of exophthalmos thrills and bruit.

Thus far we have discussed three main groups responsible for the great majority of thyroid pathology resulting in hyperthyroidism. It is not within the scope of this paper to discuss malignancies of the thyroid gland such as carcinoma and sarcoma or the acute and chronic infections which are extremely rare. We will now go back to the symptomology of our three groups, mainly puberty hyperplasia, exophthalmic goitre and adenomatous goitre.

In the first group, the disease usually begins at puberty and is often first manifested by weakness on exertion and palpitation of the heart. On close questioning we will find the patient is full of energy and ambition but goes to pieces easily. She is emotional, high strung and often irritable. She cries and laughs on slight provocation. There is generally some loss of weight and the hands and feet are cold and moist. The gland is

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moderately enlarged, the eye signs are negative but there is an occasional thrill and bruit over the superior pole of the gland just lateral to the thyroid cartilage over the site of the superior thyroid artery. This type may disappear spontaneously, especially after a change in the living habits of the patient, but recurs easily and may persist indefinitely and even go on to more severe grades of hyperthyroidism.

These patients are a real problem because one is apt to overlook the seriousness of the situation and they often receive but scant sympathy from their parents and friends, to say nothing of the doctor who dismisses them and tells the worried patient she is merely a little nervous and she will get over it alright. Yet when you see many of these patients in later life they have not gotten over their nervousness and many of them have been misfits and unhappy all of their lives. They have had difficulty in holding jobs and have been divorced or deserted by their husbands. Many of them are treated for heart trouble and are convinced that their underlying trouble is with their hearts. When medical treatment has failed in these cases over a period of about six months, surgery should be resorted to.

Let us now consider the symptomalogy produced by the more severe form of hyperthyroidism, namely, the exophthalmic type. Here we will find all the symptoms present that one finds in the more mildly hyperplastic type except that they appear in a more aggravated form and in addition exophthalmos is generally present during some stage of the disease but not necessarily so. Weakness is perhaps the most important and earliest symptom. At times the patient is fatigued on slightest exertion. This is often noted on walking or ascending or descending stairs as a weakness of the quadriceps muscles. Palpitation of the heart is also an early and prominent symptom and causes the patient considerable concern. There is also throbbing of the neck vessels, emotionalism and tremor. The tremor is noted when the patient extends the arms and spreads the fingers as a fine tremor better demonstrated by placing a slip of paper on the dorsum of the hand.

There is also a flushing of the skin which may come and go and dermatographism is always present. The hair is dry and brittle and generally not very abundant. There is a thinning out of the eyebrows laterally. Quite frequently these patients are in the habit of chewing their finger nails, as a consequence of which their nails are generally unsightly.

There is increased irritability, increased perspiration and dyspnea. Although all of these patients are nervous, many of them will deny it stoutly. I have only recently seen a man, assisted by his wife and daughter, climb a flight of stairs to my office rather than make use of the elevator and slump exhausted into a chair. His radial pulse was 180 beats per minute while it was impossible to count his apex beat and his heart was greatly dilated. This thyroid gland was large and symmetrical. Thrills could be felt and bruit heard over the entire gland. Yet this man denied being nervous and insisted he just wanted to get into shape so he could stem his tobacco. In spite of ligation of both superior thyroid arteries he died four months later of cardiac decompensation although his hyperthyroidism was considerably improved.

On examination one will find that these glands are symmetrically enlarged and have a firm lobulated or granular feel. Thrills and bruit are invariably present, at least over the superior thyroid arteries. Exophthalmos is frequently present in some form or other. Further there are often one or more of the following eye signs present. One, imperfect motility of the upper lid or inability of the upper lid to follow the eye ball completely. This is known as Von Graefes sign. Second is Stellwag's sign or lessening of the involuntary winking. This is generally associated with a widening of the palpibral fissures and gives the patient a staring look. Moebius' sign, or a disturbance of convergence, is the last important sign. As the eye follows the finger toward the nose one of the eyes is seen to break away and rotate outward.

Increase in the radial pulse rate is invariably noted and often one finds a pulse deficit. The heart in these cases is often enlarged and murmurs as a rule can be heard. In these cases one often finds edema of the extremities and other signs of cardiac insufficiency.

These patients, as a rule, have excellent appetites but in spite of this, gradually lose weight. Their loss of weight being a good index as to the severity of their condition. Vomiting is often present along with diarrhea. although this latter is a late and grave symptom.

In the adenomatous group, which is by all odds the most common, we find a more chronic complaint in contrast to the acute onset of the exophthalmic type. The trouble often dates back to puberty although the symptoms are not as striking as in the last group. There is generally a feeling of constant fatigue appearing soon after the patient rises in the morning. The pulse is easily stimulated and may or may not be elevated. These patients complain chiefly of periods of depression and melancholia. There is a mild loss of weight, although in many instances there is no demonstrable loss, and vasamotor instability. Exoph-

thalmos is never present nor are there any thrills or bruit or other eye signs.

On examination one finds an enlargement of the neck which is asymmetrical. There may be but one palpable nodule or there may be many and of varying sizes. These may compress the internal jugular vein so as to make the superficial veins stand out as tortuous dilated channels. When there is one large nodule on one side and a smaller one on the other, tilting the head may cause a compression of the trachea, difficult breathing and even cyanosis. Large adenomatous masses on either side may cause such pressure on the trachea as to in time cause a softening or absorption of the tracheal rings and a flattening of the trachea. The space within which these tumor masses may grow is limited to a great degree laterally and backward. They must therefore grow upward, outward and downward to a large extent. Consequently they often descend beneath the clavicle to a greater or lesser degree. This does not cause a great deal of difficulty at operation if the portion descending beneath the clavicle does not enlarge after its descent. When the reverse occurs great mechanical difficulty may be encountered. That is, when the base of the mass is larger than the apex. The broader base often cannot be removed without splitting the manubrium. These are the kind that give retro manubrial dullness and often cause cyanosis by pressure on the deep veins. These larger types present no real difficulty in diagnosis and there is rarely any difference in opinion as to their disposition. But when the gland is but little enlarged and a mass about the size of a hazel nut or a little larger is palpable the family physician often advises waiting in spite of the symptoms produced. However, these nodules will not disappear and it is useless to wait or delay operation.

Excision of the adenomatous nodules always results in a striking cure, although I will repeat that both lobes of the gland should be explored so that all of the offending tissue may be removed. It is not unusual to remove the main mass and on further search find small nodules, pea size or smaller, which if left, are sure to give trouble.

In the exophthalmic type a portion of the gland and posterior capsule must be left in order that the para thyroid glands and recurrent laryngeal nerves might be spared so in these cases the early improvement seen may not be as striking as in the adenomatous group but this remnant of gland soon reverts to normal and the results are uniformly satisfactory. The more radical the resection the more prompt is the relief from symptoms. One should be guarded, however, and not be too radical, especially in patients who have not lost a great deal of weight and in patients of advanced years or a hypothyroidism might result, which is quite distressing. If one were to choose between the two evils of hyper or hypothyroidism I would choose the latter as it is easily controlled by thyroid extract, while the former is ungovernable medically and will call for further resection. The only judge there is as to the amount to be resected is the operators own experience but in general it should be quite radical.

In closing it would be well to mention certain tests used in demonstrating the presence or absence of hyperthyroidism. The test best known to the profession is without doubt the determination of the basal metabolic rate. The working principles of this test are known to all of us and it would be useless to mention them here. However, there are some dangers and pitfalls that are worth mentioning. First of all, if the test is not done by a perfectly capable technician it is worthless and misleading. There are chances for error that must be remembered: the machine may be faulty, error may be made in calculation, or the patient may be sick or unwilling to cooperate. Also the tables for calculation in young individuals are faulty. I have often seen determinations made upon patients which were either too high or too low as judged by clinical experience and have later found that a more careful determination would more accurately check with clinical experience. It is, however, a valuable test and is especially valuable in following the pre-operative course of a patient. As in a very sick patient with a rate of possibly 60 occasional checks during the period of iodinization one can accurately follow the remission of symptoms and choose the opportune time for operation.

A second test which is not as generally well known as the determination of the baso metabolic rate is the Epinephrin Hypersensitiveness Test of Goetsch first published in 1918. This is made possible by the fact that the patient who has an over supply of thyroid secretion present is sensitized to the action of adrenalin chloride. A positive reaction is obtained in these cases when between 5.0 and 7.5 minims of 1/1000 adrenaline chloride is injected subcutaneously. A positive reading is obtained when the pulse or blood pressure or both increase 10 points. There is also an increase in the respiratory rate and there is an exacerbation of all clinical symptoms such as nervousness, tremor, often crying, blanching of the skin and a feeling of being cold with later flushing and a return of warmth. It was incidentally noticed a few years later that the white blood count closely followed the increase in the pulse and blood pressure.

The height of the reaction takes place a few minutes after injection and disappears in between an hour and an hour and a half. This reaction is always positive when hyperthyroidism is present and if it is negative in a border line case we are sure we are not dealing with hyperthyroidism.

## JAUNDICE—ITS CAUSE AND CURE*

C. F. Long, M. D.

Elizabethtown.

Definition: Jaundice is a condition brought about by an excessive amount of bilirubin in the blood, causing a yellowish discoloration of the skin, mucous membranes, conjunctiva and fluids of the body. It is a symptom and not a disease and is found in a number of conditions. Some men treat catarrhal jaundice as a separate disease. Many subdivisions are used as obstructive and non-obstructive jaundice resulting from changes in liver, changes in blood and from obstruction. Another grouping is hematogenous and cytohepatic. The principal subdivisions are those based on the etiology as, for example, the jaundice of Hanot's cirrhosis and that of Weil's disease. This condition is found from early days of infancy to old age. All types of people may be affected but some groups are more subject to certain types of jaundice; as in the bronze type of cancer in old age.

Jaundice may be classified under four main groups as follows:

I. Obstructive anywhere in bile passages 80%.

II. Hemolytic.

III. Toxic or infective hepatitis.

IV. Hereditary jaundice.

Causes of obstructive jaundice as follows:

(a) Obstruction of lumen of the ducts, as gallstones, parasites, pedunculated tumor, or foreign body.

(b) Changes in the wall of the duct; as stricture of the common or hepatic duct; congenital or secondary to inflammation or operation, malignant tumor, benign tumor, catarrhal jaundice, infective cholangitis, suppurative cholangitis, inflammation of ampulla of Vater, spasms of duct, or of Oddis sphincter.

(c) Pressure on bile ducts from without;

(1) Pancreatic causes; as chronic pancreatitis, cysts, lues, tuberculosis, calculus.

(2) Duodenal lesion; as tumor or ulcer.

(3) Hepatic lesions; as cancer of liver, cysts, abscess or gumma.

(4) Enlarged glands; as malignant, inflammatory, luetic or tubercular.

(5) Adhesions; as of liver, gallbladder, duodenum or stomach, etc.

(6) Tumors; as of stomach, kidney, retroperitoneal structure or uterus, etc.

(7) Angulation due to extreme ptosis of organs.

Etiology of chronic obstruction usually caused by common duct stone, cancer of the head of pancreas, so-called catarrhal jaundice and chronic pancreatitis.

History in the case of jaundice is very important. The character of the case, the duration of the condition and the evidence of the preceding disease are naturally of importance. For example, in jaundice due to gallstones, the onset is probably sudden. In the acute catarrhal type there is usually a history of a preceding acute gastro-intestinal disturbance.

Symptoms: Icterus of a lemon-yellow to greenish-brown noted first in the conjunctiva, then mucous membranes of mouth, skin of face, neck, body, and extremities in order named. When the jaundice is slight it may be found only in the sclera and sometimes then only by very close examination in good daylight. The degree of involvement and shade of color is of value in establishing an etiological diagnosis. For example, in the milder cases the cause is often found to be some toxic process giving rise to the hematogenous type. In the bright yellow type the cause is usually acute catarrhal jaundice or some acute infection as Weil's disease. In the deeper shades of yellow we suspect some obstruction as gallstones or malignancy. The duration also is important in establishing the cause. The permanent type suggests some process as cirrhosis or carcinoma.

Pain: This is a symptom that often leads to information as to the cause of jaundice. The dull pain or no pain is usually found in carcinoma, while in gallstones the recurrent paroxysms of severe pain help in the diagnosis.

Itching: Itching is a very annoying symptom.

Clay colored stools due to lack of bile and undigested fats.

Hemorrhage which tends to be of a spontaneous character.

Coagulation time is also delayed.

Slow pulse, lowered blood pressure and heart action may be irregular.

May have minor nervous symptoms or they may be grave as delirium or coma in cholemia.

Usually have constipation but may have diarrhea from decomposed fat.

May also have anorexia, flatuance, nausea and vomiting.

Blood serum tinged with bilirubin which gives immediate direct reaction of Van den Bergh which proves the obstructive nature of

*Read before the Kentucky State Medical Association, at Murray, September 11, 12, 13, 14, 1933.

the jaundice. Secretions are colored as sweat, tears, saliva and milk, rarely. All tissues of body except the nerve tissues may be stained.

Cerebral symptoms as irritability, depression of spirits or melancholia may be present. In persistant jaundice may have coma, acute delirium or convulsions.

The reticulo-endothelial system is thought to be the cause of hemolytic jaundice. That is the cells of Kupffer of liver, cells lining the sinus of spleen and some in the bone marrow.

There are two varieties of bilirubin:

1. One which has passed through the liver cells giving the direct immediate Van den Bergh caused from obstruction of the bile passages. This type of bilirubin is found in the obstructive jaundice.

2. One which has not done so, and passes into the blood stream giving the indirect or delayed Van den Bergh, and giving the form of jaundice known as hemolytic.

3. When both forms of bilirubin are present we have what is known as toxic jaundice and the biphasic reaction of Van den Bergh.

Hemolytic Jaundice.

In hemolytic jaundice the bilirubin is thought to be formed outside of liver cells in the reticulo-endothelial system mainly of the spleen. The increased blood destruction causes an increase in the formation of bilirubin, but of a different nature, to that of a purely obstructive jaundice. As above stated the Van den Bergh reaction is the indirect delayed and the same as given by bile pigments normally found in the blood serum. The bile may be found in the urine in form of urobilin while bilirubin is rarely if ever found in the urine in this type of jaundice. The removal of the spleen in this type of jaundice has proven of benefit, this proving the influence of the spleen.

Toxic or Infective Hepatitis.

This is a fairly common form of jaundice because of the wide range of etiology. The liver function tests show there is a great damage to the liver cells. There may be any grade of damage from cloudy swelling as in typhoid fever to marked necrosis as in yellow atrophy. The Van den Bergh test is of little value in this form of jaundice as both forms of bilirubin are present. However, we know that there is not only obstruction but hemolysis of blood and must watch out for severe anemia with its associated symptoms. The main causes of this form of jaundice may be grouped as follows:

A—Infectious diseases, as typhoid fever, pneumonia, yellow fever, etc.

B—Chemical poisons: Chloroform, arsenic, phosphorus, etc.

C—Toxic conditions as uraemia, acute yellow atrophy.

The symptoms are not so clear-cut as in obstructive jaundice. Bile is present in the stools and icterus may be very mild. The urine has usually no bile pigment but urinary pigments are increased. There may be high fever, delirium, convulsions, coma and hemorrhages.

Hereditary Jaundice.

There are several groups under this heading. First, icterus neonatorum or jaundice of the new-born. This may be very mild and clear up in less than two weeks. Again a baby becoming jaundiced after or around ten days to two weeks deserves close observation as it may have congenital absence of common or hepatic ducts, or may have congenital lues which may be easily recognized from other signs and symptoms of lues.

Second form of jaundice under this heading may be classed as splenomegalic hemolytic jaundice. There is no obstruction. The jaundice is usually slight, stools are normal in color, urine free from bile. The red blood cells are very fragile and severe secondary anemia may be present.

Treatment of this type is removal of spleen and other symptomatic measures.

The treatment of jaundice as in other conditions demands the removal of cause. If this is impossible then symptomatic relief is indicated such as free saline elimination, alkaline baths for itching, etc.

Acute Catarrhal Jaundice (Acute cholangitis)

A jaundice due to the inflammation of liver and bile duct and usually obstruction of the distal end of common duct. There is usually a catarrhal inflammation and may be gallstones. There is often an extension of the inflammation from the ampulla of Vater or from irritation of passages by gallstones, catarrh of duodenum and sometimes infective fever. The exact nature of catarrhal jaundice is unknown but it is probably a result of infection in liver and bile passages. It is particularly a condition of early adult life, though it may occur at almost any age. Most cases are in the third and fourth decades. It is more common among men. Some of the factors that are thought to help cause catarrhal jaundice are: Constipation, improper eating; especially poorly prepared food; highly seasoned food; alcoholism; physical or mental strain; exhaustion and acute infectious diseases.

Symptoms: May be very mild and the first thing noticed is a tinting of the skin although the conjunctiva is first to show the tint. Then the face and down the body. Again there may be pains and a sense of heaviness about the liver and stomach. In

epidemic form the onset may be severe with headache, chill, nausea, vomiting, constipation, usually, though there may be diarrhea, clay colored stools with foul odor. Temperature of 101-102 usually is found in cases. All the signs of obstructive jaundice are present. This condition usually is found in young, healthy persons and clears up in three to six weeks. Mild cases may clear up in two weeks or may persist for three months or longer. The stools should be noticed as they give the first indication of the clearing of the obstruction. Cases that persist longer than two or three months should arouse suspicion of malignancy.

Treatment: Simple diet, leave off fats, and as the old doctor said, give a round of calomel, either one or may be as many as three and follow with saline laxative and alkaline waters. If nausea, give small amounts of carbonated drinks at frequent intervals and skim milk with lime water.

Jaundice is closely associated with many conditions and diseases of the liver, gall-bladder, and related organs. In fact, if all was said about jaundice that we find in literature and text books it would of itself make a large volume. There are some rare forms of infectious jaundice that we shall give only a mere outline.

Acute Infectious Jaundice. (Weil's disease)

An acute infectious disease characterized by sudden onset, jaundice, fever 103-105, gastro-intestinal disturbances, severe pain and muscular soreness, enlarged liver and spleen, and nephritis. More common in fall of year. More common in male 9 to 1, Ages 15-30. Rare in United States. Caused by spirocheata transmitted by rats. Mortality is low in this country but fairly high in some foreign countries. The disease usually lasts two or three weeks. Has a tendency to relapse. The spirocheata are found in the blood 5 to 7 days after onset. Found in the urine after about 10 days.

Treatment is about the same as for catarrhal jaundice. That is free elimination by saline laxatives, fluids, rest alkali and giving arsphenamines.

Acute yellow atrophy of the liver.

This is a disease characterized by destructive changes taking place in the liver cells, accompanied by jaundice, fever, hemorrhages, cerebral and gastro-intestinal disturbances. This is an extremely rare condition. Cause is not known but dissipation and indiscretions of diet play a part. Usually fatal from 10 to 14 days. Jaundice develops about the third or fourth day and gradually deepens and may take on a greenish tint. The condition grows worse rapidly. Temperature runs 104 to 105 until the fifth to tenth day and may fall to sub-normal. Active mania and nervous phenomena are characteristic later going into depression and coma. Hemorrhage is common. Treatment is largely symptomatic.

## DISCUSSION

**D. Y. Keith,** Louisville: What little experience I have had in the x-ray examination of the gall-bladder in jaundice has been that we rarely find stones by x-ray in that condition. The Graham-Cole test is nearly always negative. It has been my experience in the few cases that we have examined in jaundice that we have been of very little value to the patient and very little to the surgeon. No gall-bladder shadow is the usual report.

If you have malignant tumor of the gall-bladder, particularly papilloma, and you are fortunate enough for some of the dye to go in the gall-bladder, you are able to make a diagnosis frequently from x-ray, particularly if you will be persistent in raying your patient several times. In other words, when the gall-bladder is well filled you may not be able to see a defect, but you are more apt to see the defect if the gall bladder is partially filled, so for that reason, as the gall-bladder empties it is more important that you continue to ray your patient.

It has been our experience in these cases where we have been asked to see the patient before dye is given, that if a ray is taken before the dye is given and you find a stone before the dye reaches the gall-bladder you are of some service to the patient. If a Graham Cole test is given and the gall-bladder doesn't fill, your examination is ended and you are not much better off than you were before, only you know the bladder doesn't fill and you do not know you haven't a papilloma of the gall-bladder.

**George Hendon,** Louisville: I don't know of but two kinds of jaundice, those that can be cured by surgery and those that cannot be cured by surgery. The jaundices that are produced by conditions that interfere with biliary discharges of course are the ones with which I am most familiar, and another type that I have just a casual contact or acquaintance with is that due to degeneration of the liver cells. The ones that are due to the obstruction or interference with the flow of bile can usually be cured by removing that obstruction, and those cases of jaundice that are due to degeneration of the liver cells, unless it is cancer, can be cured by venoclysis.

**Virgil Simpson,** Louisville: The scope of the subject assigned to the essayist permits but an outline presentation in the time allotted to the essayist. To a discussion of the cause an hour might profitably be devoted. The cure would demand equally as much time, even were one to decline to be critical and interpret cure, as used by the Program Committee, to be synonymous

with treatment. Hence, what I shall say is meant to be supplementary.

The conception of Jaundice as a term applied to a group of symptoms has been materially broadened since the time of graduation of most of us. One may, therefore, benefit from an interpretive definition. If we think of it as a group of symptoms the result of obstruction of a sector of the bile passages, a necrosis of liver cells or a disturbance of the metabolism of the bile-hemoglobin pigment series, it is at once realized that the frontiers of the older physiologies have been materially pushed back. It is to this bile-hemoglobin pigment series that your attention is invited.

Bile pigment is an end product of metabolism eliminated from the blood by the liver. It originates from at least three compounds, hemoglobin, myohemoglobin and cytochrome. The conversion of hemoglobin into bile pigment is not a function of the liver alone, but is shared by the bone marrow and the spleen through the activity of the cells of the reticulo-endothelial system. The Kupffer cells in the liver belong to this system. It is not associated with the process of digestion as has long been thought, but its elimination can be influenced by proper modification of the diet. The amount excreted during each 24-hour period is about 8 mg. per kilo of body weight. It is eliminated from the liver as bilirubin and unlike bile salts and lipoids is not reabsorbed from the bowel to an appreciable degree in health It is reabsorbed from the liver again, reaching the blood stream. Its absorption from the liver is chiefly through the capillaries and to a lmited degree, if at all, by the lymphatics. For clinical purposes the bile pigment is thought of in terms of bilirubin, which is found in normal blood in amounts ranging from 0.1 to 0.7 mg. per 100 c. c. of blood. It exists in two forms in physiochemical states in the blood plasma. In one form the bilirubin is held in close combination with plasma proteins and is not easily removed by the liver cells; this gives rise to the delayed or indirect Von den Bergh reaction. In the other form the bile pigment is easily dissociated from the plasma protein and is capable of reabsorption from the liver; this gives the direct reaction of Von den Bergh.

Bilirubin end products find their way into the urine and becomes susceptible of laboratory detection, even measurement. Some of the bilirubin eliminated with the bile is carried along the intestinal canal and is converted into biliverdin and then to stereobilin. Some of this is absorbed to be eliminated in the urine as urobilin, where on standing it is finally converted into urobilinogen.

No little has been written concerning the toxicity of bile. Bile pigments are relatively nontoxic. It is the bile acids that determine the toxicity phenomena in Jaundice, to which the name the **Cholemia** has been applied. This toxic syndrome does not occur in jaundice due to a disturbance of pigment formation, the so-called hemolytic jaundice. It must be emphasized that bile-pigment and bile-acid excretion are independent formations of the liver and do not necessarily parallel.

In the light of these newer facts an attempt to classify Jaundice must at present be inadequate. It must also be remembered that the existence of a pure type is probably rare. If a simple obstructive jaundice obtains, the flooding of the liver cells with bile cutting off their blood supply, may very well result in a necrosis of the liver cells. Here, then, a combination of obstructive and toxic jaundice would be found. In the same manner in a so-called hematogenous jaundice, increased viscidity of bile and the formation of pigment stones may result in an obstructive form becoming grafted on the original type and then it is an easy transition to necrosis of cells and cell cords, and the toxic form is added to the others.

**C. F. Long,** (in closing): I have nothing further to add except to thank the gentlemen for their discussion. I heartily agree with Dr. Simpson. As I said, if I had known what this subject covered I wouldn't have tried to write a paper. I didn't try to write anything about the treatment. I thought that would be brought out in the discussion. The cause of jaundice alone would certainly make the paper cover a whole afternoon if I went into it in detail. I merely made an outline in this paper, as you can see.

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**Hypoglycemic Symptoms in Diabetes.**—Roholm and Hess Thaysen report that, after intravenous injection of 12 units of insulin, symptoms of insulinism developed in 98 out of 101 attempts, or 97.3 per cent, in 80 persons with normal carbohydrate metabolism. In 82 experiments on 40 diabetic patients with intravenous injections of 12 and 24 units of insulin, insulinism was found in 19.7 per cent and 57.1 per cent, respectively. For development of the symptoms the blood sugar minimum must fall to about 50 mg. per hundred cubic centimeters and within about fifty minutes after the moment of injection. The kind, order, frequency and strength of the various symptoms are identical in the diabetic and the normal organism. There is no evidence of hypersuprarenalinemia in diabetes. Gastric secretion after the injection of insulin follows the same laws in diabetic as in normal persons.

# CARCINOMA OF THE LIP, REPORT OF CASES*

L. Wallace Frank, M. D., and

C. D. Enfield, M. D.

Louisville.

Patient, male, white, age 25, came to my office on November 3, 1933, and asked me to look at a sore on his lip. Considering his age, the first thought that naturally occurred to me was that a lesion on his lip that had been there long enough to worry him was probably due to a luetic infection. Upon examination I found a lesion probably 3 millimeters in diameter, with a scaly scab over it, which he said had been there for twelve to fifteen months. Upon removing the scale and examining the lesion through a magnifying glass, the edges were white and indurated. On palpation the lesion was relatively hard. Examination of his neck revealed one or two palpable glands in the submental region but nothing else.

A diagnosis of cancer of the lip was made and operation was done three days later, removing the glands in the submental region and on both sides of the neck and pathological examination by Dr. A. J. Miller revealed carcinoma. So far as the lip lesion is concerned, it was comparatively easy to eradicate but the glandular metastases are a more serious matter.

My reasons for reporting this case are two-fold: first. I believe we are going to have to revise our conception of carcinoma as a disease of middle age because we are seeing cases of cancer in the twenties and early thirties with increasing frequency.

Second, this case illustrates the fact that cancer of the lip in comparatively youthful individuals is, as a rule, very malignant, metastasizing early. In older individuals a cancer of the lip may, and often does exist for two or two and a half years without any evidence of involvement of the glands. In younger persons, therefore, the prognosis is more frequently unfavorable.

Patient, male, white, age 21, was referred to Dr. Enfield from a neighboring Kentucky town and in turn referred to the Norton Infirmary Cancer Clinic. He had a cauliflower growth involving about one-third of his right lower lip, extending above the normal surface of the lip about three or four millimeters. It was approximately two centimeters in width by one centimeter in depth, with very little infiltration into the lip.

Dr. Wallace Frank and Dr. Enfield saw the patient when he came to the clinic and formed our conclusions independently, but fortunately agreed in our recommendation to the patient, which was that surgery and not radiation should be employed. Because of the age of the patient and the extent of the lesion, I felt that he should have the most radical treatment possible at once. There were some palpable glands on the same side as the lesion and some smaller ones on the opposite side. I carefully explained to the patient the alternatives of radium treatment of the lip lesion and surgery of the glands in the neck, or surgical treatment of both, which latter course we recommended, but he chose what to him appeared to be the more conservative plan of radiation treatment of the lip lesion and resection of the glands. Application of a very large dose of radium in a wax cast over a period of about five days resulted in a temporary complete disappearance of the lip lesion, following which Dr. Frank did a resection of the glands in the neck. Upon pathological examination these glands were reported inflammatory, not carcinomatous.

The patient was directed to return within six weeks for further treatment and failed to do so, but did return about six months later with a local recurrence. We again recommended surgery of the lip lesion which he again refused and much against our judgment we gave him more radium treatment which resulted in some palliation. He went home with instructions to return in two or three months, which again he failed to do and the last report we had of him was that there had been hopeless recurrence in both the lip and the neck.

Of course, we cannot say positively what would have been the result in this case if the patient had consented to our original conception of the ideal treatment which was radical surgery, followed by radiation.

## DISCUSSION

**J. Garland Sherrill:** My position on the question introduced by this discussion has been expressed so often that I can do nothing but repeat it.

We all recognize that malignant conditions occur in comparatively young individuals much more frequently than we formerly believed. Also that the results in such cases have not been materially improved, which is in great part due to the fact that the patient is often confused by the varying opinions he gets as to the proper course to pursue. He goes to the surgeon who recommends radical surgical procedure; then he goes to the radiologist and is advised to try radium or x-ray treatment. Many other plans of treatment are suggested, some of them absolutely worthless.

The best interests of these patients demands consultation and co-operation between all three departments of medicine, the general practitioner, the surgeon and the radiologist, to the end that a crystallized opinion may be given to the pa-

*Read before the Louisville Medico-Chirurgical Society,

tient. We are all inclined to be more or less partial to our own particular branch and too cock-sure in our individual opinions. Our thought and efforts are not crystallized and co-ordinated as they should be and the result is confusion in the patient's mind as to the best course to pursue.

I would make this general statement: If you are going to operate for cancer, never do a trivial operation, but make it radical and get rid of it, lock, stock and barrel. I do not mean to say that radiation is of no value, but there are many cases that do not respond to that sort of treatment.

**Louis Frank:** Dr. Sherrill has touched upon the keynote of the treatment of carcinoma anywhere in the human body, and that is co-operation—he said between the general practitioner, the surgeon and the radiologist, which I would amend to include the pathologist. The chief barrier to complete co-operation is individual prejudice. If one is prejudiced against radium treatment, if one is prejudiced against biopsy studies, if one is prejudiced against deep x-ray therapy, then one cannot achieve the best results in the treatment of these patients. All of these departments must co-operate and collaborate if we expect to continue the advances that have been made in the treatment of carcinomatous disease.

We all recognize that when this disease has reached a certain point, there is no cure for it, but its earlier recognition, which I believe can be accomplished through closer co-operation, will carry us a long distance in the way of improving our results. Furthermore, it is not sufficient to know that we are dealing with a carcinoma, but we must be able to classify it according to type in order to be able to say what the results of certain forms of treatment will be, the probability of recurrence, etc.

I am heartily in accord with Dr. Sherrill in his opinion that wide removal of the disease, when practicable, is the best method of treatment, but we do know there are certain types of cancer in which the results of other methods of treatment compare very favorably with those from surgery. I believe it is generally accepted, not only by surgeons but by pathologists, gynecologists and radiologists generallly, that in carcinoma of the cervix, for example, (except in a small percentage of cases that are radio-resistant) radium treatment is superior to any form of surgery. Even after surgical treatment of this condition we cannot be certain that there are no carcinomatous transplants in other glands or areas, and there is where deep x-ray therapy and radium treatment come into play and help to destroy the disease.

We must bear in mind that there is a wide difference between local and distant recurrences of carcinomatous disease. It is difficult to understand, for instance, why a cancer of the breast removed in 1920 should recur in the spine nine or ten years later. In all probability the metastatic disease in the spine was there at the time of the primary operation, but we do not always know this. Medicine is not an exact science, but we must distinguish between such recurrences and those which take place in the line of incision, the cicatrix, or the glands which are most often due to incomplete removal.

The lip is a favorable site for carcinoma. I saw the other day a patient who, twelve years ago, had a cancer of the soft palate. Treatment with radium resulted in disappearance of the disease with later recurrence in the submaxillary glands. Resection of the glands was followed by recurrence in the posterior triangle of the neck, and further resection was done in that region. It has now been twelve years since the first operation and the patient is perfectly well today.

The two cases reported tonight are very interesting in themselves. We have heretofore believed that carcinoma was a disease of middle age, but we have seen it with increasing frequency in younger individuals, some of them even younger than the two cases reported tonight. It is, of course, more frequently encountered in individuals of more advanced years, perhaps because a certain period of time is required for continued irritation to cause proliferation of the epithelial cells and consequent development of carcinomatous disease. Hence, we rarely see carcinoma of the cervix, for example, in young or non-childbearing women. Where it does occur as the result of infection of long duration, it usually requires eight to twelve years of such continued irritation to result in proliferation of the epithelial cells which in turn gives rise to carcinoma.

What carcinoma is we do not know. We used to say that it was of bacterial origin but this has never been definitely established. Certainly no efficacious treatment of the disease has been developed, and today surgery, radium or x-rays, and actual cautery are the methods upon which we must rely in combatting carcinoma. Furthermore, there is no way in which carcinoma can be positively diagnosed except by the microscope. However, great advances are being made in the study of this disease and it is not too much to hope that future developments will enable us to offer these patients much more than we can at the present time. Further development of x-ray therapy I believe holds the greatest hope for future advancement in the treatment of carcinoma.

**L. Wallace Frank,** (in closing): I would merely emphasize two points brought out in the discussion.

First, the advantage of pathological study in dealing with carcinoma, as pointed out by Dr. Louis Frank. The pathologist is a great asset, not only in diagnosing questionable lesions but in determining which cases are susceptible of

benefit from radium or x-ray treatment and which are not. The advice given to the patient should always be based upon pathological study. It is perfectly useless to subject a patient with a radio-resistant lesion to x-ray or radium therapy. In such cases it is better to excise the lesion locally and then apply radium or x-rays.

Second, I agree with Dr. Sherrill that any advice given to the patient should be the crystallized opinions of men in all branches of medicine. It was with this end in view that the Cancer Clinic at Norton Infirmary was established. Here it is not the opinion of one man or two men, but the crystallized opinions of three or four, including the surgeon, the radiologist and the pathologist. In the presence of a lesion about which there is the least doubt, a biopsy specimen is taken with the radio knife, the knife or the cutting forceps, and the patient is told to return after the examination has been completed.

**C. D. Enfield,** (in closing) Apropos of Dr. Sherrill's remarks, I would say that in the particular case reported this patient happened to have been referred to me instead of to the Cancer Clinic. I did not choose to treat him radiologically, but in turn referred him to the clinic and suggested surgical treatment.

As pointed out by Dr. Frank, patients coming to the clinic are seen not only by Dr. Louis Frank, Dr. Wallace Frank and myself, but by other members of the clinic, after which, at a conference, each offers his individual opinion, and occasionally we disagree violently, but, I think, without personal bias and certainly without bias as to the form of treatment to be recommended to the patient.

Without some startling new discovery there can be no immediate answer to the cancer question except real co-operation between the surgeon, the radiologist and the pathologist, without bias and without regard to personal preferences in the matter of treatment.

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**Primary Carcinoma in Meckel's Diverticulum**—Franke relates the history of a man, aged 54, who was operated on because of ileus symptoms. A Meckel's diverticulum the size of a fist was found. Its surface was ulcerated and it exuded jelly-like, mucous matter. The histologic examination revealed an adenocarcinoma with marked-formaton of mucus but without metastases. The patient recovered. The author points out that primary carcinoma of Meckel's diverticulum is extremely rare. He found only one other case, reported by Wissely in the Amercian literature. He assumes that the primary carcinomas of Meckel's diverticulum develop from scattered embyonal traces; that for a long time they take an entirely benign course, and that, when they are removed early enough, they show a better tendency to heal than do other carcinomas.

## CASE FOR DIAGNOSIS*

GUY AUD, M. D.

Louisville.

A married woman, age 46, referred by Dr. J. M. English, Elizabethtown, Ky., was admitted to St. Joseph Infirmary on September 19th, 1933. Briefly, the history and physical findings were as follows:

Family History: Mother and one sister living and well. Father died of heart disease at the age of 70. No history of tuberculosis, cancer or diabetes in family.

Marital History: Married 19 years. Two children living and well. Normal pregnancies and deliveries. No miscarriages.

Menstrual History: Onset at 13 years, of 28 day type, lasting 5 to 6 days, moderate flow, no clots, very little pain or discomfort. Seldom confined her to bed. No vaginal discharge between periods.

Previous Diseases and Injuries: Had measles, mumps and whooping-cough during childhood. No serious injuries. No operations. Occasional attack of tonsillitis. No history of sinusitis. Has had "indigestion" for fifteen years with occasional attacks of pain in the right upper quadrant of abdomen, radiating into back, accompanied by nausea and, during some attacks, vomiting. Attacks followed by soreness in this region for a few days. No chills, fever or jaundice. Has been much relieved of the above symptoms during the past few years, during which time she has enjoyed very good health.

Present Illness: Ten days before admission to the hospital the patient had a chill which was repeated daily for three days and accompanied by fever, nausea and vomiting and severe pain in the lower abdomen, much worse in the left lower quadrant. Her family physician was not called at the onset of her illness and, at the time he examined her, the abdomen was soft and flat and slightly tender in the left lower quadrant. At this time she had no fever. Her husband stated that she had a slight cold for several days previous to the onset of chills. That it was not severe and did not require treatment or prevent her from performing her usual household duties. Was not seen again by her physician until the day before admission to hospital when her condition became worse. She had developed a diarrhea, pain in lower abdomen and slight distention. The abdomen was soft and moderately tender throughout. There was no nausea or elevation of temperature at this time. When seen by her physician next morning the abdomen was distended; there was marked guarding of the rectus muscles and the patient was vomiting. The vomitus was foul

*Read before the Jefferson County Medical Society.

but the odor was not fecal. She was given 1/4 gr. of morphine and removed to the hospital. Upon admission to St. Joseph Infirmary three hours later the following findings were noted: The patient is a well developed and nourished adult female; lying quietly in bed, is stuporous but can be aroused and appears very ill.

Physical Findings: Temperature 102° F. Pulse 110. Respiration 30. Blood pressure 108/70.

Skin and Mucous Membranes: The skin is dry and over the chest, back and shoulders are large irregular scars and pigmented areas from an old healed skin lesion. There are no furuncles or other infections present. The tongue is dry and heavily coated.

Eyes, Ears, Nose and Throat: The pupils are equal and react normally to light and accomodation. The sclera is clear. The ears, nose and throat are essentially negative. Thyroid gland normal.

Heart: Normal in size and position, rate rapid, rhythm normal, no murmurs.

Lungs: Negative to percussion and auscultation.

Abdomen: Moderately distended and tympanitic. Marked tenderness and rigidity throughout. Auscultation reveals fairly active peristalsis. No masses palpable. Liver not enlarged.

Pelvis: Uterus normal in size and position, symmetrical, freely movable but extremely painful on manipulation. Both tubes and ovaries negative to palpation. No vaginal discharge.

Urinalysis: Catheterized specimen. Specific gravity 1.020. Reaction acid. Albumen and acetone one plus each. One granular cast and 4 to 6 pus cells to each one-sixth field. A few amorphous phosphates.

Blood Examination: Hemoglobin 74 per cent. Red blood cells 4,330,000. Color index 0.8. Leukocytes 24,000. Polymorphonuclear neutrophiles 98.5 per cent.

Treatment: Operation was not thought indicated. Ten per cent glucose in normal saline solution was started immediately and continued at the rate of 3500 c. c. per day. Nothing was given by mouth. Morphine was given to control pain and restlessness. Ice bags were applied to the abdomen and head. Enemas resulted in the passage of small quantities of gas and feces. On the morning following admission to the hospital her general condition seemed slightly improved. Temperature 99.4° F. Pulse 110. Respiration 28.

The blood examination was repeated and was unchanged. The abdomen was more distended and rigid. Six hours later the temperature was 103.2° F. Pulse 136. Respiration 40. Death was impending and occurred 36 hours following admission. She was not nauseated and did not vomit after reaching the hospital. The urinary output was satisfactory.

The autopsy findings by Dr. H. B. Weeter were as follows:

Body is that of an obese, well built, middle aged adult, white female. Patchy areas of the skin on chest, shoulders and back have a silvery appearance of undiagnosed skin condition.

Abdomen is distended and fluctuant but not board-like. Intestines and stomach are markedly distended and pasted together by yellowish fibrinous exudate. There is abundant free pus in the pelvic cavity, abdominal recesses and upper abdominal cavity extending clear to the diaphragm.

Liver shows fatty degeneration and congestion.

Gall bladder is moderately fibrous and contains numerous stones ranging from 5 mm.-30 mm in size. There is no evidence of acute cholecystitis.

Pancreas shows no evidence of acute pancreatitis.

Spleen is large and covered by thin fibrinous exudate, otherwise not remarkable.

Gastro-intestinal tract; there were no ulcers in the stomach or duodenum, which was traced throughout its entire extent. There were no intestinal perforations.

The appendix was about 110 mm long, lay over the brim of the pelvis, was slightly swollen and covered by exudate, but cross section of appendix showed no acute appendicitis originating within the appendix itself.

There were no diverticuli of the intestines.

Kidneys had the gray color of toxic albuminous degeneration.

Uterus was not remarkable. Endometrium showed no evidence of old or recent inflammation.

Tubes were swollen, contained no pus, inflammation being limited to outer wall.

The pericardium is smooth, glistening and contains about 100 cc clear straw colored fluid.

The heart is of normal size. There is no evidence of arteriosclerosis.

Right lung lies free in the pleural cavity. Pleural surfaces are smooth and glistening. Lungs are remarkably free of anthracosis. An area of atelectasis about 50 mm in diameter occurs at the lower margin of the right lung. The right pleural cavity contains about 200 cc of clear straw colored fluid. The left lung lies free in the pleural cavity. The pleurae are covered by thin yellowish fibrinous exudate, chiefly at the base. There is similar area of atelectasis on the left side. There is no evidence of consolidation in either lobe.

The upper surface of the left diaphragm is

likewise dull, covered by exudate, and shows petechiae.

Bacteriological smear of peritoneal exudate shows lancet shaped diplococci with capsules, characteristic of pneumococci. Culture — Pneumococcus type 1.

Sections show: Lungs — congestion of capillaries.

Base of left lung—inflammatory exudate involving pleura only.

Diaphragm—infiltration by polymorphonuclears.

Liver—fatty degeneration and marked congestion.

Gall bladder—fibrous contraction of mucous folds, round cell reaction of wall, inflammatory reaction of polys involving serosa.

Pancreas—moderate round cell reaction of fibrous stroma, no evidence of polymorphonuclear infiltration.

Kidneys—congestion and swelling of tubular epithelium.

Appendix—acute inflammatory exudate of peritoneum; wall shows moderate round cell reaction; mucosa moderate fibrosis.

Tubes 1 and 2—moderate swelling and adherant exudate with no evidence of salpingitis.

Final Report: Pneumococcic peritonitis type 1.

## DISCUSSION

**C. J. Armstrong:** The case presented is very interesting and I have had considerable difficulty in formulating a picture to fit the clinical signs and symptoms described. I agree with Dr. Aud, however, that the supportive treatment outlined in the report, rather than opening the abdomen, was indicated at the time the patient was admitted to the hospital.

The history of "indigestion" presented by this patient is, to my mind, suggestive of gallbladder disease, either a chronic cholecystitis or a cholecystitis with stones, and I have no doubt that Dr. Weeter's autopsy report will bear this out. However, I do not believe that had anything to do with the patient's present condition.

I believe that what we have to deal with in this case is a septic condition confined to the intestinal tract, and very low, either in the terminal ileum or colon—probably in the colon and most likely in the descending portion near the sigmoid flexure. The chills, fever, leucocytosis, dehydration, etc., all indicate a rather profound infection directly connected with the intestinal tract.

The pain and tenderness seem to have been confined to the lower left quadrant and immediately we think of several conditions which might cause these symptoms. Adnexal disease is fairly well ruled out. There was considerable pain and tenderness upon manipulation of the uterus but I judge this was due to tugging on the broad ligaments when manipulation was instituted. Meckel's diverticulum should be considered, because left-sided pain is present in about 2 per cent of such cases. In this case, however, the duration was ten or eleven days, and we would expect Meckel's diverticulum to progress to a fatal termination much sooner than that.

Ulcerative colitis would also come in for consideration, possibly with perforation. I judge that the stool was not remarkable in this case or something would have been said about it. In ulcerative colitis one would expect to find considerable blood in the stools.

The possibility of a left-sided appendix, which is a fairly rare condition, must also be considered. Here again, however, one would expect a more rapid termination.

Diverticulosis of the colon with inflammation of the diverticulum would have to be considered seriously. This condition occurs much more frequently than is ordinarily supposed and is often noted by x-ray men in detailed gastro-intestinal studies. It is one of those things that may occur on the left side. I am always a little dubious about left-sided conditions. The symptoms are not so pronounced nor the land-marks so well charted as on the right side. Diverticulosis rarely causes ulceration of the mucous membrane; hence, blood in the stools in this condition is rare. There may be no marked symptoms until the diverticulum becomes acutely inflamed and ruptures.

I am inclined to the belief that this patient had a ruptured diverticulum with spreading peritoneal involvement, with congestion or perhaps pneumonia as a terminal condition.

I hope that Dr. Weeter found a chronic gallbladder, or perhaps stones.

**Frank M. Stites:** This case presents several very interesting points. As suggested by Dr. Armstrong, the history of indigestion over a period of fifteen years seems to point very definitely to gallbladder trouble.

Several weeks ago I heard Dr. Frank Lowe, of Boston, read a paper before the Interstate Assembly on cholelithiasis, in which he stressed the point that tenderness continuing for several days after an attack of pain in the right side is almost pathognomonic of gallbladder disease. It is significant that this patient presented such a history.

As I see it, however, the patient's condition is not related to these attacks of indigestion. The sudden onset of pain in the lower left abdomen, accompanied by chills, fever, nausea and vomiting, in a middle-aged female in previous good health would, on first thought, suggest appendicitis of the so-called left-sided type, which is usually the result of adhesions to the cecum. However, the blood count showing 24,000 leucocytes with 98½ per cent polys is rather higher than would occur in appendicitis, especially of the type in which we would expect to find adhesions extending over to the cecum.

In a female, the next thing one would think of would be the pelvic organs. Acute salpingitis seems unlikely in view of the pelvic examination. Ovarian cyst with twisted pedicle is a possibility. In this condition the onset is sudden but there is usually more profound shock than seems to have been evidenced by this individual.

Urinary calculi will produce left-sided pain with sudden onset, but is usually accompanied by higher temperature and more severe chills than this patient had. Also there was no blood in the urine to speak of. The urinary findings, I think, exclude renal pathology. Recent studies in renal pathology have brought out the fact that in pyelitis involving the right side the pain is very frequently in the lower abdomen, and in left-sided involvement the pain is usually in the back or higher up in the abdomen than in this case.

The presence of scars on this woman's back, evidently due to some old disease, would suggest the possibility of lues. No mention is made of a Wassermann test, but I presume that possibility was ruled out. Also the fact that she had two normal pregnancies and no miscarriages would seem to preclude lues.

All things considered, I feel very much like Dr. Armstrong, that in this case we are dealing with a condition of the lower bowel, most likely a diverticulitis. We know that the sigmoid is the most frequent site of diverticuli in the intestinal tract. Hayes, several years ago, divided diverticulitis of the colon into four classifications; (1) self-limited diverticulitis; (2) diverticulitis with abscess formation; (3) diverticulitis with obstruction and (4) carcinoma developing in a diverticulitis. In this case the first classification can be definitely ruled out. As I see it the most likely diagnosis would be diverticulitis with abscess formation. When the patient was first admitted to the hospital the abscess was localized and after an enema and morphin seemed much better for a few hours, followed by a sudden change for the worse. No mention is made as to whether or not peristalsis was present at that time.

It would appear that rupture of the abscess occurred, followed by peritonitis and death.

**C. L. Nicholas:** I would say that this woman had an acute pancreatitis, probably with pancreatic abscess. The blood picture would seem to fit this theory; likewise the history, indicating previous gallbladder trouble, from which infection may have traveled along the lymph channels to the pancreas. In pancreatic abscess we usually find the pain confined to the left lower abdomen. It would appear, however, that an acute pancreatitis would have produced more pain than this patient seems to have had.

**Harry M. Weeter:** Pneumococcic peritonitis usually occurs in children and more often in females. In a study of 34 cases Duncan found the age incidents to range from ten weeks to thirteen years, 80 per cent of which cases occurred in females. Type one pneumococcus predominated in the cases studied.

The source of infection in most cases is thought to be through the genital tract, accounting for the much higher incident in females. Other foci, such as sinuses and respiratory infection followed by blood stream transmission, are thought to exist.

In the case under discussion the exudate involving the diaphragm and the base of the left lung appeared to be of more recent origin than that of the peritoneum, giving the impression that the diaphragmatitis and pleurisy of the base of the left lung were secondary to the peritonitis. In spite of this fact and in view of the negative appearance of the uterus and tubes, and no history of vaginal discharge, we are led to believe that there probably was an initial, unrecognized respiratory infection followed by peritonitis of blood stream origin and a pleurisy with diaphragmatitis.

**Guy Aud,** (in closing): I think those who have discussed this report have done remarkably well. It is, perhaps, a little unfair to report a case like this one and expect a listener to diagnose the type of peritonitis of which the patient died. It is evident to all that this patient had a peritonitis; but, it is a little too much to ask any one to diagnose a pneumococcic peritonitis, especially as the patient presented no history of a respiratory infection of any consequence. The only history, along this line, was of a very slight cold to which the patient had paid no attention, and even this was obtained only after the patient had died. Physical examination of the chest was negative at the time of admission to the hospital.

There is considerable literature on the subject of primary pneumococcic peritonitis. A recent article in the Journal of the A. M. A. cites 26 cases occurring in the Obraztov Hospital in Moscow. Of this number, 21 were girls and 5 were boys. Something like 75 per cent of these cases were of the generalized type of pneumococcic peritonitis, the remainder being of the encysted type. In the generalized type the mortality was 100 per cent; in the encysted type, where the infection was walled off, only one death occurred.

We know that metastasis of pneumococcic infections of the respiratory tract does occur. Some time ago I saw a man with a huge abscess developing in the abdominal wall following a bronchial pneumonia and cultures from the abscess showed pneumococci.

Dr. Weeter suggested that the reason this condition occurs more frequently in the female than in the male, is that in females the infection is sometimes spread through the vagina, but Ternovskiy says that certainly this was not

true in any of his cases, none of which showed any evidence of a vaginitis.

Murphy reports a number of cases of pneumococcic peritonitis and his opinion is that a chronic sinusitis often plays a greater part in the development of the condition than the more acute types of respiratory infections.

## DIAGNOSIS AND TREATMENT OF THE CHRONIC SINUS, WITH ESPECIAL REFERENCE TO THE ANTRUM*

CLAUDE T. WOLFE, M. D.
Louisville.

Several weeks ago I was approached by Dr. Pryor, of the program committee, requesting that I discuss this subject before the society.

Appreciating the breadth of such a subject, I was rather reluctant to accept, as much must of necessity be left unsaid. The field is entirely too broad to even attempt to cover it in one evening. I, therefore, trust that my efforts to abbreviate and the many things that I will have omitted, through necessity, will be brought out in the discussion.

By way of introduction I wish to state that from personal observations, I am definitely of the opinion that chronic sinusitis is never primary, always secondary to some acute infection in the nose or upper respiratory tract. We are all more or less susceptible to the "common cold." Several factors may play a part in increasing this susceptibility, i. e.—a lowered resistance, exposure, etc. But, if through an accident in our younger days a deflection of the nasal septum should have occurred our susceptibility will be increased, and this local abnormality by interfering with drainage and aeration of one or more of the nasal accessory sinuses may sooner or later be directly responsible for an acute inflammation involving these cells. The recurrent coryza is also a predominating cause, and often we see acute infections in the sinuses following influenza, scarlet fever, diphtheria, measles and infected teeth.

The prognosis of the acute sinus, under careful treatment, is good; but the point to be emphasized is that each attack predisposes one to another and subsequently we are confronted with a chronicity.

We divide the nasal accessory sinuses into five groups. These, as you know, are the frontals, anterior and posterior ethmoids, maxillary antra and the sphenoids. All of these sinuses are more or less related anatomically and communicate with the nose proper through drainage. From an anatomical standpoint I cannot conceive of infection showing a preference to any particular sinus. Yet, from personal observation, I am sure that the ethmoids are more often infected with the antra next.

While chronic infection of one or all of the sinuses only partially disables the individual, his state of health is impaired in proportion to its severity and the number of sinuses involved. Mental depression is often noted and his ability to concentrate may be markedly impaired. Symptoms of melancholia, neurasthenia and general malaise are occasionally observed in these cases.

Subjectively, sneezing is one of the commoner symptoms occurring in the early morning and usually in severe paroxysms. Fortunately, this is often intermittent.

Of the commoner symptoms headache predominates. It is usually intermittent in type and is often worse in the morning while pus is present in the sinuses. Naturally we would expect headache in the frontal area with an infection in the frontal sinuses. Pain over the cheek, especially upon pressure, is indicative of an antrum infection. Pus in the sphenoids usually causes pain in occipital region and back of the neck. Ethmoiditis gives rise to pain over the vertex, the root of the nose and occasionally it radiates over the mastoid process.

However, with sinuses draining freely, headache may not be complained of by the patient. Therefore, the severity of the pain may be an index as the amount of pus the sinus or sinuses are retaining.

The exudate in any chronically infected sinus is distinctly purulent which usually drys and forms crusts greatly interfering with breathing and markedly adding to the patient's discomfort. The quantity depends upon the number of sinuses involved and the severity of the infection. The patient's history, with few exceptions, shows periods of profuse discharge which may last several days to be followed by a remission, which in turn is followed by another acute exacerbation.

The treatment of the chronic sinus may be divided into local, general and operative. Our chief aim should be the establishment of free drainage, proper aeration and the removal of diseased tissue especially in the antra.

Should a deflection of the nasal septum exist it should be corrected before proper aeration can be established. Naturally nasal polypi demand removal for the same reason, but since polypi are associated with the chronic sinus and are a result of this infection their removal is not at all a curative measure, but simply enables the patient to breathe with more comfort for the time be-

*Read before the Jefferson County Medical Society.

ing, as they usually recur. Packs of argyrol as advocated by Dowling and neo-silvol and glycerine as suggested by Skillem promote better drainage and often cause a subsidence of the symptoms but usually some type of surgical intervention is necessary before free drainage is definitely established and a cure is accomplished.

In our attempt to diagnose a chronically infected sinus there should be no jumping at conclusions. The patient should be permitted and encouraged to talk as freely and as long as he desires in describing his symptoms. Hurried conclusions leading to mistaken diagnoses in a few cases have taught me the value of tolerance and patience. The taking of a history in any given case is as difficult as it is important. These patients are evasive, they are forgetful, and they are inclined to minimize the importance of sypmtoms. Then, too, on re-checking their history they often reverse their statements.

No patient is given more consideration and time than the one who complains of "Chronic Catarrh" with a history of either a posterior dropping of pus into his throat or a discharge in his nose necessitating frequent blowing to rid the nasal cavity of this material. Naturally, we are very much concerned as to the character of this discharge, its color, consistency and the frequency of its appearance. The number of handkerchiefs the patient soils in twenty-four hours is of importance. It gives us an insight as to the quantity of pus he expels which may be an index as to the number of sinuses involved.

If the patient frees his nose by blowing, we feel reasonably certain that the anterior group of sinuses are affected, namely the antra, frontals and anterior groups of ethmoidal cells. Should he complain of the secretions dropping into his throat it usually means that the posterior group of ethmoidal cells or sphenoids are affected. The relative position of these sinuses assisted by gravity are responsible to a certain extent for the way the secretions flow.

Careful examination of the nose after shrinking the mucous membrane is very important, especially if suction is used. Following this procedure we often see pus in the middle or superior fossa of the nose, the presence of which and its position is fairly diagnostic as to the sinus or sinuses involved. In this connection I wish to emphasize the time of day for this examination, suggesting that the procedure be conducted as early in the morning as practicable as the sinuses show a tendency to empty themselves as the day goes on.

Further diagnostic methods should include transillumination of the anterior group of sinuses. This method offers nothing conclusive for even polypi in the antra and atrophied mucous membrane symbolic of chronic infections, offer no obstruction to transmitted light. Even lavage of the antra may return free of secretions in many chronic cases. Even radiography of the sinuses, though dating back to 1897 when Schier first diagnosed pus in the maxillary antrum and confirmed the diagnosis by irrigation, we now definitely know that this offered nothing conclusive. Though his observations were carefully studied by such brilliant men as Pfahler, Coakley, Mosher and Caldwell who were sure that they had established the fundamentals and all believed that every infected antrum could be diagnosed by the x-ray. The observations of these men proved to be inaccurate, for it soon followed that most rhinologists, after careful study, concluded that the x-ray, while of value even with good readings could not wholly be depended upon. These conclusions were not hastily drawn but were compiled from observations noted at time of operation.

The confusion existing among the rhinologists following these conclusions was deplorable. Many advocating radical surgery and others conservative, but no common ground was reached until scarcely more than four years ago Proetz and Mac Cready experimenting with iodized poppy seed oil as an injection into the antrum followed by x-ray cleared up this confusion. Though the French were using this oil previously, its use was limited to the spinal column and the ventricules of the brain. Therefore, Proetz and MacCready are given credit for first using it in the nasal accessory sinuses.

The value of this oil was soon recognized by rhinologists and shortly its use became widespread. Today its value as a diagnostic agent is appreciated by all rhinologists. Even stereoscopic views have become more popular and are of great assistance, with the antra filled with oil, in bringing out finer details which are of great diagnostic importance.

Now, in the search for the focus of infections in asthma, chronic bronchial coughs, arthritis, chronic myocarditis, pyelitis, cystitis, various eye conditions, headaches and unaccountable elevations of temperature it is not sufficient to report that the nose shows no evidence of polypi or pus. The x-ray without lipiodol may show slight changes with readings by good men, and irrigation of the antra may be negative. Yet these observations are neither final nor sufficient.

Too many cases show haziness in roentgenograms and a negative lavage, yet when opaque oil is injected into the antrum a definite filling defect is many times observed

which proves on operation to be a cystic membrane frequently dotted with numerous polypi or small abscesses in its walls. It is these patients, especially, suffering from some indeterminable source of infection that are relieved by operation.

In my early training it was the consensus of opinion that with infections in the anterior ethmoids and frontals the secretions would gravitate into the maxillary sinuses on account of their close anatomical relations as they had more or less a common duct for drainage. This theory has been more or less disproved for it has been demonstrated that iodized oil injected into the maxillary sinuses will, with the head in the nose-forehead position drain into the ethmoidal and frontal sinuses during the short time it takes to make the Roentgen exposure. With this thought in mind you may judge how quickly an ethmoid or frontal sinus may become infected by pus from the antrum when the patient lies down at night. This observation has led to the conclusion that the greatest value of opaque oil is in determining the condition of the antra and I, personally, feel that the future increasing use of iodized oil, except in very select cases, will be largely confined to the maxillary sinuses.

The contra-indication to the injection of lipiodol is in the acute cases, in patients with active tuberculosis, toxic goitre or in any individual having an iodine hypersensitivity. During the stage of the early infection the clinical symptoms make the diagnosis. Surely no reputable rhinologist would consider any operative measure at this time. Palliative treatment, including shrinkage of the nasal mucous membrane, moderate suction, rest in bed, a sedative if necessary and careful post nasal irrigation will usually suffice to effect a cure.

To reiterate, iodized oil has no place in the acute cases. Only in the chronic to determine the size of the antrum, whether there is hyperplasia of the mucous membrane which would create a filling defect, whether the lining membrane has localized abscesses or polypi. Any or all of these latter symptoms is indicative of chronic infection. Surgery offers the only hope of permanent relief. To verify this statement, I wish to show a few x-ray pictures of patients that have come under our observation recently. All have chronically infected antra and in most instances evidences of this chronic infection is manifested in the bronchial tree.

## DISCUSSION

**Joseph C. Bell:** One condition that has been difficult in the diagnosis of sinus disease from the x-ray standpoint has been the inability of the radiologist to determine whether the changes shown are hyperplastic in character or whether they are due to the presence of purulent material in the sinuses. It is not uncommon to find a sinus that is markedly increased in density which, when irrigated, shows no appreciable amount of pus to be present. This is confusing until it is recognized that many of these sinuses do not contain any great amount of pus but that the increase in density is due to very extensive hyperplastic changes in the mucosa lining the sinus.

The radiologist sees both the acute and chronic types of sinus disease, many more of the latter group than of the former. There are three types of chronic disease, the hyperplastic type, the purulent type and ones in which there is a combination of the two. The one first mentioned is offering the most difficulties in diagnosis. Dr. Wolfe has said that the use of opaque oil solves this diagnostic problem. I believe that hyperplastic and purulent types of sinus disease can be differentiated by x-ray without the use of opaque oil in the large majority of cases. Exceptions to this are in those cases where the involvement is chiefly in the anterior or posterior aspects of the sinus involved. Purulent material may frequently be demonstrated in a sinus by making films with the patient in the upright position. In my practice this position is not used routinely but is employed when indicated.

**A. L. Bass:** That the lay public as well as many general practitioners have an erroneous conception as to the curability of chronic sinus disease is largely our own fault, because we have led them to believe that there is practically no cure for it. One of my good surgical friends recently asked me if there was any cure for chronic sinus disease.

The question of the relation of chronic sinus disease to the general health as affected by such conditions as chronic bronchitis, or bronchiactasis, chronic arthritis and asthma, is one that has been widely discussed lately. Only recently I had a case in which I felt that some focal infection was causing a chronic arthritis but I could locate no trouble in the nose. Transillumination and irrigation of the antra were negative. X-ray picture, however, showed involvement of the antrum and at operation a considerable amount of diseased mucous membrane was found, a culture of which showed the presence of pneumococci.

Jackson, thirty years ago, brought out the fact that while irrigation might relieve the symptoms, it did not necessarily cure the condition, and that many cases operated upon subsequent to irrigation, with no pus and no evidence of involvement at the time of operation, still showed marked disease of the mucous membrane. Infected teeth has been suggested as a possible cause of antrum infection in twenty-five to thirty per cent of cases.

Pain is a characteristic symptom of chronic sinus disease, usually coming on between six and

eight o'clock in the morning and continuing until one or two o'clock in the afternoon. The damming up of pus in the sinus is almost always the cause of pain in either acute or chronic sinus disease. Stirring around promotes drainage, relieves the pressure and alleviates the pain. Sometimes we have to employ a little suction to help out.

The degree of pain is not necessarily evidence of the amount of involvement. In some cases with marked involvement of the antrum no pain is evident, while in other cases it is so severe that morphin will not relieve it.

Transillumination and x-ray while valuable are not infallible. The x-ray lipoidol is valuable in revealing filling defects. The other day I saw a case which followed a dential infection that was cleared up some eight or ten months ago. Transillumination was negative, and upon x-ray examination the report came back negative. However, upon injecting lipiodol an antero-posterior plate was negative, but a lateral view showed a half to three-quarter inch filling defect.

Another thing that lipiodol has done is to show the drainage of the different sinuses. The Frenchman who injected lipiodol into the sphenoid has shown that it drains down from the posterior wall of the sphenoid under the trapezius muscle, and some of it will get down into the the lungs, bearing out the theory that bronchiectasis may occur as a result of antrum infection. In some of these cases it is extremely difficult to get a history of previous antrum involvement. In one case of marked bronchiectasis it took me nearly a week of interrogation to finally elicit a history of a neuralgia in the side of the face for which the patient had taken aspirin and applied a hot water bottle for a period of ten days or two weeks, and I am satisfied that he had antrum involvement at that time.

**Oscar O. Miller:** One of the most constant findings in the average patient coming to the tuberculosis clinic is a chronic cough. It is one of the outstanding symptoms that brings the patient to the attention of the physician. It has been our experience, in examining these children, that they do not have an oridnary bronchitis, but rather what might be called a unilateral bronchitis with a localized pneumonitis in the bases of the lung. When we find this condition we feel that we have to deal with more than an ordinary bronchitis, and our experience has led us to believe that many of these cases are complicated by a sinusitis, most frequently of the maxillary antrum. Recently we have been endeavoring to visualize the antrum by a screen examination, which is an exceedingly gross method, but in some instances we have been able to see very definite cloudiness in them. Manifestly these are chronic cases and there can be no relief of the bronchitis until the sinus has been attended to.

Most radiologists now feel that where the film is negative for tuberculosis and some other chronic respiratory infection is present, an examination of the sinuses is warranted and many of them on their own responsibility make x-ray films of the sinuses in an effort to clear up the case and establish a correct diagnosis.

In allergic bronchitis we have a quite different picture. These children when they come to the clinic give a history of an apparently ordinary rhinitis. However, an ordinary cold when it gets well, clears up completely, whereas an allergic rhinitis is characterized by frequently recurring attacks with a hang-over of some of the symptoms in the interim between recurrences. In allergic rhinitis there is usually no history of any other cold in the family, whereas in ordinary rhinitis there is nearly always a history of some other member of the family having a cold; in other words, it is contagious. The child usually gives a history of some allergic phenomena, of having had eczema or some other type of disturbance. Upon examination of these children we find a greatly enlarged mucous membrane in the nose, which is pale and there is a mucous discharge, whereas in purulent rhinitis we have a hyperemia with a purulent discharge.

Cohen and others have shown that a smear from the nose of the allergic type of case shows more than 10 per cent of eosinophiles, whereas an ordinary acute rhinitis shows polymorphonuclears, leucocytes and very few eosinophiles.

Naturally, in the treatment of the allergic type of case the first step is to determine the allergins to which the patient is sensitive, whether food, water or certain forms of proteins. One physician has reported that his son developed an acute rhinitis every time he ate veal.

Upon x-ray examination we find that the allergic is the type of case that is characterized by hyperplastic changes in the antrum, whereas in the other type of case the sinus involvement is of a purulent character. Occasionally we see a combination of the allergic type with a chronic infection engrafted upon it which will usually clear up when the allergin has been worked out.

**Benjamin L. Brock:** Six or eight months ago Dr. J. C. Bell read before the staff at Waverly Hills a paper on the subject of "Sinus Diseases from the Standpoint of the Roentgenologist." At that time the question of the frequency of sinusitis in tuberculous patients was discussed and we conceived the idea of running a series of tests on patients as they were routinely admitted to the Sanatorium, to determine what percentage of cases would show positive evidence of sinus disease.

As Dr. Wolfe pointed out in his paper, the frequency of sinus involvement depends largely upon the general condition of the individual, and we considered the possibility that, in view of the rundown condition of the average tubercu-

lous patient, we might find a greater percentage of sinus involvement than would occur in the same number of ordinary non-tuberculous individuals.

We began the routine x-ray examination of the sinuses of every patient admitted to the Sanatorium, and after we had x-rayed about forty cases Dr. Bell was kind enough to come to the institution and go over the results with us, and they were so interesting, not only from the standpoint of the frequency of sinus disease in these patients, but also from the standpoint of diagnosing early bronchiestasis, that we have continued the studies up to the present time.

We have now x-rayed 259 sinuses and have found a surprisingly high percentage of positive cases. Only 69% were found to be negative. Twelve and a half per cent showed definite thickening of the mucosa—the type of diseased sinus that appears to be taking care of itself; 14½ per cent showed definite cloudiness; 4 per cent showed definite polyp formation without the use of lipiodol for diagnosis. I do not know how these percentages would compare with those in the same number of non-tuberculous individuals because we have not run any controls in these examinations.

The most important thing we have learned from the work is this: We are unable to determine from ordinary x-ray examination of the chest in many cases whether the patient has a bronchiectasis or not, and in the absence of definite symptoms of bronchiectasis lipiodol injection of the lungs would not be indicated. In an institution such as Waverly Hills instead of waiting until the advent of definite symptoms of bronchiectasis and then x-raying the sinuses, I believe it is better to x-ray the sinuses first, and in all cases showing definite sinus involvement to do a lipodol injection of the lungs provided there is no contraindication. We have carried out this procedure in 15 cases showing positive sinuses, and of that number 10 were found to have bronchiectasis; the other 5 were negative for bronchiectasis but some of these showed marked cloudiness in the base of the lung indicating a pneumonitis. In a further study of 18 cases which were negative for sinus involvement and questionable for bronchiectasis, the percentages were reversed. Upon injection of the bronchial tree with lipiodol 12 cases, 66 2/3 per cent, proved negative for bronchiectasis, while 6 cases, 33 1/3 per cent, were positive.

The important thing in these cases is not only to clear up the sinuses to prevent possible damage to the lungs, but to definitely establish the presence or absence of bronchiectasis. In the one instance definite upper-lobe bronchiectasis was established in a case which had previously been diagnosed as pulmonary tuberculosis.

**Will R. Pryor:** According to Professor Hirsch of Vienna 60 per cent of sinus infection is found in the antrum, 90 per cent of infected antra arising from intra nasal infections and the other 10 per cent from infections of the teeth. He attributes the predominence of infection in this particular sinus to its faulty drainage. Before realizing this he removed polyps from one hundred ethmoids with recurrence in each instance.

I formerly thought that any radical antrum in which the opening under the inferior turbinate closed had been improperly operated. However, I have done more than fifty cases in clinic and private practice and have used various techniques, in some laying down the nasal mucous membrane after carefully making it into the form of a flap and in others merely rasping through the opening and removing the mucosa with scissors and ethmoid biting forceps. In two cases there was a reformation of bone which necessitated making another opening in the inferior meatus. I would like to know if the essayist has had a similar experience.

The lack of pain in the usual chronic sinus is interesting. This symptom appears with the acute exacerbation. I recently had a patient suffering from agonizing pain back of the right eye, over the right side of the face and in the right occiput. There was no pus on suction and transillumination was negative. Cocainization of the sphenopalatine ganglion gave no relief. A diagnosis of purulent sphenoiditis was made by the x-ray man. On the strength of this the posterior end of the middle turbinate was removed and the anterior wall of the sphenoid taken down. Pus was found and the patient was relieved almost immediately.

Close co-operation between internist and rhinologist is necessary. Undoubtedly the greatest advance in the diagnosis of chronic sinus disease in recent years has been due to the x-ray. If it is possible to eradicate the source of the infection in the sinuses before the chest condition becomes well established and self-sustaining the patient can be spared a life of discomfort and frequently misery. I have in mind three cases which were relieved of the early stages of asthma by radical ethmoid and antrum surgery. In another case, perhaps the earliest I have seen, a man suffered from violent paroxysms of cough. An x-ray of the chest with a lipiodol injection showed beginning bronchial changes. He gave a negative sinus history. However pus was washed from both antra following which his chest symptoms rapidly disappeared. Lipiodal injection in this case showed no thickening of the mucosa.

It is most interesting to what extent the antral mucosa can swell from an acute nasal infection. I would like for the essayist in closing to state whether he has had any experience with swelling of the mucous membrane following injection with lipiodal in the chronic type of case.

**Gaylord C. Hall:** Speaking to the point made by Dr. Bass, if any case of chronic sinusitis may

be regarded as incurable it is due to one of three things.

First, the patient may have a lowered resistance, with practically no reparative power, and would probably be unable to throw off any form of infection.

Second, the patient may have a chronic sinusitis complicated by an allergic condition, as Dr. Miller has pointed out. The thing to do in such a case is to have the patient tested out to determine what allergins he is sensitive to. If they be few and susceptible of control by regulation of diet or restriction of contact, all well and good. If, however, the patient is one of the type that reacts to almost everything, then we have an almost impossible combination of circumstances. We may by surgical measures clear up the sinusitis, but those individuals with marked sensitivity to innumerable allergins will very probably continue to suffer.

Third, ill-advised and inadequate surgical procedure. I would emphasize the importance of radical antrum surgery in well-established chronic cases. Those of us who have done the Caldwell-Luc operation after having previously made an intranasal opening have been surprised to find that, notwithstanding our efforts to make a large opening, how small that opening really was. And then, upon opening the antrum through the cheek and seeing this thickened polypoid membrane, we do not see how we could ever have thought that adequate drainage could be secured through an intranasal opening. When the case reaches the point where we just must do a radical antrum operation, we are not going to get as good results as if it had been done earlier.

The essayist mentioned the operative technique. I would like to call attention to a slight variation of the original technique, suggested by Dr. Lerry, of Omaha, who does not pack and does not suture the flaps to the cheek. I have tried this in two instances and have been very much gratified by the results. There was a surprising lack of pain after the operation, less swelling of the cheeks and marked diminution in the amount of discharge. It worked so well in these two instances that, unless I encounter troublesome after-bleeding, I think my future Caldwell-Luc operations will be free of sutures and packing.

**Lee Palmer:** Sinusitis as an etiological factor in asthma has been mentioned by the essayist.

While it is true that in the great majority of cases, asthma is caused by extrinsic substances or proteins, there are a few individuals who, while not in the least sensitive to any form of extrinsic proteins are sensitive to intrinsic allergins or bacteria.

This infection is usually located in the sinuses, but may be in the nose, throat and bronchial tree. A culture should be made; the organisms separated and a vaccine prepared from each. An intradermal test should be made with each vaccine. It will then be possible to determine to which organisms, if any, the patient is sensitive. He should then be treated with graduated doses of this vaccine. This procedure plus proper surgical treatment, if any is needed, will some times give relief.

**Claude T. Wolfe,** (in closing): Heretofore in dealing with sinus conditions in which there are allergic manifestations in the same patient it has been impossible to obtain a specimen of the secretion from the antrum by ordinary methods without great danger of contamination. Recently, however, there has been an instrument placed on the market in the form of a trocar with a double canule. After introducing this instrument into the antrum the trocar and oustide canule are removed leaving the unsoiled canule in place. The secretions are then removed by gentle suction. I think the suggestions made by Dr. Palmer can be carried out to a better advantage through the aid of this instrument.

Active tuberculosis offers the chief objection to the use of lipiodal. This objection, in my opinion, is far-fetched as the lipiodal can easily be withdrawn by suction or removed readily by lavage if untoward symptoms justify. Its value as a diagnostic aid so far offsets the possibility of precipitating activity in a latent tuberculosis that I have practically disregarded it. In its use of more than two years not a single contraindication has presented itself.

Occasionally we have tried to determine the length of time lipiodal will remain in the antrum and have concluded that it depends largely upon the amount of destruction that has taken place in the ciliated epithelium which would be indicated by the chronicity of the disease. Naturally repeated x-rays would answer this question.

In answer to Dr. Hall's question relative to the necessity of closing the incision made in the gingivolabial recess I might add that I have seen several men, whom I look upon as outstanding, omit the sutures and later report an occasional fistula. This to me is sufficient evidence to justify us in adding the sutures as the procedure requires but little time and is definitely a safe guard against a fistula.

Our reason for packing the wound is that it controls bleeding and tends to stimulate the rapid re-formation of the mucous membrane. In this connection I might add that we use ½ inch gauze strips with selvedged edges impregnated with vaseline to facilitate its removal with greater ease and less discomfort to the patient. This packing is usually removed on the second day following the operation and subsequent treatment consists in the majority of instances of the introduction into the antrum of nascent iodine under air pressure. In our experience this method of procedure is uniformly productive of most excellent and gratifying results.

# BIRTH CONTROL*

GAVIN FULTON, M. D.

Louisville.

Birth control, properly practiced, is a definite agent of public welfare and public health and as such, should occupy a legitimate place in the scheme of preventative medicine.

The sex urge and the instinct to reproduce in kind is a dominent factor in the mechanism of the universe and were it not for the law of the survival of the fittest, over population would have long since become a problem of the gravest magnitude. Birth control for the single purpose of defeating the natural result of sex union is ignoble and unworthy of dignified discussion. But when applied to the conservation of maternal life, the physical welfare and mental status of the offspring and the social economic positions of the family, it becomes a most important subject for thought and discussion.

A recent survey, the report of which is not yet published, estimates the maternal mortality in this country at 16,000 annually or 6 or 7 deaths to each thousand pregnancies, and further establishes the fact that a very large per cent of these deaths are needless and could be prevented. The report further states that the cause of death in the cases studied was divided in three groups, abortion, toxemia of pregnancy and hemorrhage. Septicemia held first place accounting for 40 per cent of the total with the toxemias in second place. It fixed the blame for existing conditions on the medical profession and the public. The former is accused of insufficient training and indifferenee or ignorance of the importance of prenatal care. The latter with a lack of knowledge of the dangers involved and an interest not sufficient to demand proper prenatal care or in many instances to accept it when available. The remedy offered is mainly educational.

The women should be taught the dangers of pregnancy and to recognize warning symptoms of trouble which in many instances could be averted by proper treatment. The profession should receive more intensive training in obstetrics and have greater clinical experience both during their under graduate life and internships. All this is true and beyond argument but there is another phase of the subject upon which we hear little or no discussion. I refer to that quite large group of women who die during pregnancy because of preexisting destructive disease. Tuberculosis, cardiac, renal and hypertensive disease take quite a toll from these patients, to say nothing of the terrible legacies to the offspring of the luetic, feeble minded and other mental deficients.

What have we to offer these people as a protection of their already uncertain future but birth control and that other still more pitiful group, the unborn children of parents suffering from inheritable forms of insanity, epilepsy or feeble mindedness, again nothing but contraception. If we pause to consider in our own experience, the havoc wrought by ill advised pregnancies in the medically unfit, it is but a step to realize the stupendous, sum total of the economic loss for the entire country. Assume that it were possible by some magic to change the entire obstetrical practice over night and that every doctor could be made perfect in practice and judgment, this part of the problem would still be hopeless without birth control made available through contraceptive measures. There are also other conditions for birth control to consider from a medical viewpoint, such as lactation and spacing of children. Investigations made by the Federal Children's Bureau show a sharp rise in infant and maternal mortality—as the intervals between pregnancies are shortened. The nursing mother, particularly if she be a three or four para, adds enormously to her own risk and that of her child by a new conception during that time.

And now we come to another phase of the subject. Are there any economic reasons which justify birth control? and the answer, I think most assuredly is yes. Let us consider briefly the economic conditions of the country, in fact the whole world, today. In the third year of the worst depression known to history, the suffering of all kinds is beyond description. Unemployment, hunger, sickness, lack of clothes and shelter, is strikingly evident every where. Yet propagation goes on apace and new millions are brought into the world to be inadequately cared for by various charitable agencies and many lives are sacrificed because of the pitiful inability of the under nourished mothers to withstand the ravages of the additional burden thrust upon them. Is it fair to these women, most of whom are four to six para, to make them suffer the dangers and trial of maternity over and over again? is it fair to the unborn to thrust them ruthlessly into the world dependent upon chance and charity for their very existence? I think the answer to both questions is no and I believe the time will come when the public will demand protection and advice upon this subject.

It has been said "that based upon only two unions a week, married people daily have three million occasions to choose between a chance of pregnancy and protection against

*Read before the Louisville Medico Chirurgical Society.

pregnancy," (Dickenson). These figures give rise to much thought and should encourage earnest and sober discussion of the subject. What ever is done in the matter should be done under the control and supervision of the medical profession and in order that the public may receive advice and treatment in all proper cases, the profession should be equipped with an understanding knowledge of contraceptive methods as they are accepted today.

To this end, I believe that birth control and contraceptive technique should be taught in medical schools and that the out patient departments of all reputable hospitals should have a birth control clinic where patients be treated and where physicians could receive demonstrations and instructions in the methods of contraceptive technique, and lastly the family doctor, who I do not think has entirely vanished from the earth, should bear his part of the responsibility. His relation to his patients is one of peculiar intimacy. If he is the right sort, he has his patients interest at heart in health and sickness. He knows his personal characteristics and traits, is familiar with his circumstances and his problems and is in the best position to determine the fitness for maternity and the probable effect upon the offspring thereof.

I fully realize that the course advocated may and will give rise to some abuses. Illicit relations between the sexes have existed in all past ages and will continue through the future and a general contraceptive knowledge will add but little impetus. Be that as it may, the good which shall accrue from the proper practice of birth control will far out weigh the bad. The decrease of abortion with its aftermath of infection among married women alone would be a justification in itself. It is not within the scope of this paper to discuss contraceptive methods and I have purposely avoided any description of the appliances or technique recommended in this procedure.

In closing I should like to reiterate the statement that I have nothing but condemnation for the practice of contraception for selfish reasons only but that I do sincerely believe in the application of birth control for proper medical and economic reasons.

## DISCUSSION

**Morris J. Flexner:** I am fully in accord with Dr. Fulton's views on this subject as expressed in his excellent paper. Birth control is a movement that is rapidly gaining momentum and attracting the support of the most intelligent class of people.

During the past week I saw in my office two women of the better walks of life, who boldly told of abortions which had recently been performed on them by doctors of the calibre that do this class of work. Neither one of these women knew anything of contraceptive measures. Had they been properly instructed, it would not have been necessary for them to have risked their lives by having abortions performed.

I recently had an opportunity to talk with a woman who operates a pre-marital clinic in Detroit. In this clinic young people about to be married are talked to separately and given advice which will tend to smooth the way for the necessary readjustment incident to married life. She told me that these young people frequently go from her clinic to a birth control clinic for information about contraceptive measures which will enable them to avoid having a larger family than they can afford.

I am heartily in favor of the movement and believe it will be successful. Like the essayist, I believe abortions for economic reasons are often justified; in other words, there are people who from a purely economic standpoint should not be permitted to have babies and, as a rule, the people who know the least about contraceptive measures are the ones that should have the fewest babies. It is by such methods that the quality of the world's population will ultimately be improved.

**Louis Frank:** Dr. Flexner's last remark makes me think. Today, while driving along the street, I saw a poor, old horse pulling a wagon, and the thought that crossed my mind was, what are the natural functions of animal life? The answer is obvious, to eat, to sleep and to procreate. There is nothing else. All the other things that we do are the result of our civilization. There have been many civilizations before this one that have gone down to ruin and oblivion. Is our civilization right or wrong? It is perhaps a natural instinct to believe that ours is right.

To return to Dr. Flexner's closing remark, does the employment of contraceptive measures tend to improve the human race? I think all this talk about eugenics improving the race, when we consider the existing admixtures, is a far-fetched theory, a dream that will never be realized no matter what measures we employ. We cannot breed human beings as we breed horses, hogs or chickens. In the breeding of fighting chickens, if one in the brood begins to cluck or runs off and gets on a hen's nest, off come the heads of the whole brood. We cannot do that with human beings.

Advocating birth control for economic reasons is treading on dangerous grounds. What do you mean by "economic reasons?" Does the term embrace those who, while unable to live in affluence, still enjoy some of the luxuries of life; for example, an individual who owns a car but cannot keep a chauffeur, or a girl who because she is college-bred, cannot go into the kitchen and cook? Or does it mean those who labor, who earn a living by the sweat of the

brow? When we stop for a moment to think, we remember that among those nations whose people are the greatest breeders, the children they beget are of great help to their parents in their later years, relieving their burdens and providing for their wants, in marked contrast to —shall I say us Americans?—who limit the number of births in their families. When we talk about teaching birth control for economic reasons to a woman with eight or ten children, living in what we call the slums, have we got the right slant on it? Would it not be a better plan if the so-called philanthropists who are backing this movement, many of whom have accumulated their large fortunes by the exploitation of this very class of people, would bend their efforts towards abolishing the slums and putting these people in better circumstances? I think the teaching of contraceptive measures for economic reasons is a fallacy which, if carried out to its logical conclusion, would ultimately result in doing away with the laboring class of people and make of sexual intercourse an act, not for its normal function of procreation, but purely for sensual gratification. Better, like the ancient Romans of Pompeii, have pleasure houses and let them enjoy themselves, using their wives only when progeny was desired.

**Gavin Fulton:** And where are they now?

**Louis Frank:** Where we will be three thousand years from now.

Dr. Fulton spoke of the dangers of pregnancy which, if they exist at all, are due almost entirely to our modern artificial methods of living. Pregnancy in the normal adult human being entails no more danger than it does in any other type of animal life.

**Gavin Fulton:** Why is the death rate so high?

**Louis Frank:** Because our modern civilization has introduced many things into the daily life of the average woman that are abnormal. Why does a woman have to stay in bed two or three weeks after having a baby? That is not true among what we call the savage races. We have progressed but we are paying the price, and now we are attempting to evade the obligations which our modern methods of living have imposed upon us. From a medical standpoint, contraceptive measures are justified in the presence of tuberculosis, kidney disease, or other definite contraindication to pregnancy.

We might get a great deal farther if we would look at this question from a social point of view and render sterile habitual criminals, individuals with disease which are markedly hereditary, such as epilepsy, and people of similar types, and we might finally get to a point where eugenics might be seriously considered.

If contraceptive measures had been in vogue on the Island of Corsica, the world might never have known Napoleon; if the early pioneers of this country had been acquainted with contraceptive measures, Lincoln might never have been born. Many of the outstanding characters which adorn the pages of American history sprang from the very class of people to which the essayist would, for economic reasons, teach contraceptive measures. I do not believe we have the right to sit in judgment on these people and to say that because they cannot send their girls to Vassar and their boys to Yale they should not have children.

**J. Garland Sherrill:** Dr. Fulton's subject is timely and his conservative attitude is to be commended. If the average man postponed marrying until he could afford a family, there would be very few marriages. Youth, which cannot be repressed and will not be denied, coupled with a desire for the establishment of home ties, is what makes a man marry. In the present day, however, home life seems to be going out of style. Homes have been replaced by pigeonholes where the mothers and fathers play bridge while the children are out automobiling with the opposite sex. They do not have enough work to do. Labor is an essential requisite of the human race. One must learn to work if he would be of value to the community and lead a normal, healthy, happy life.

So far as economic reasons for birth control are concerned, there may be many reasons why certain people should not have children but, as Dr. Frank has suggested, it is going too far when we attempt to dictate to our fellows the number of children they shall be allowed to have. Some men would like to sterilize their wives but not themselves. Recent history has proven that whenever a nation attempts to control propagation in an attempt to produce a superior race, it goes on the down grade. One nation reached the point where it believed it could whip the world. Men who deal with the ever-increasing number of nervous diseases in this country will tell you that repression of the sexual desire tends to produce neurotics and insane people.

A little learning is dangerous thing, and the little that is taught women at birth control clinics may do more harm than good.

On the other hand, I am in favor of pre-marital clinics, where young people may be taught the things necessary for them to know how to live normal, healthy lives, but not how to prevent conception. That the mortality rate from child-birth is higher in this country than in those countries where midwifery is practiced does not speak well for our medical men and obstetricians and for the most part is not their fault. In Denmark, for instance, the women work in the fields and are strong and vigorous, unlike our own women, many of whom modern methods of living have rendered unfit for normal childbearing.

To my mind, the widespread teaching of contraceptive measures is playing with fire, and

personally I have come to the conclusion that it is not within my province to act ex-Deus in such matters.

**C. W. Hibbitt:** I think there are some indications for the practice of contraceptive measures that we should recognize and respect as, for example, one of the several diseases of women in which pregnancy is contraindicated. The question of birth control for economic reasons is one that is open to debate. Unquestionably, if we would better the race we must encourage the poorer classes to forget contraception and bear childern. While they will undoubtedly produce many imbeciles, epileptics, and the like, it is also true that many of the outstanding characters in the history of this country had their origin in the lower walks of life.

At the present time the question of birth control seems to have gotten out of the hands of the medical profession and has become a purely mercantile proposition. One has only to go to the nearest drug store to learn all one wants to know about contraceptive measures and to procure any of the necessary drugs or appliances without the need of a doctor's prescription. They are handed over the counter to any one who asks for them.

**Oscar O. Miller:** I wish to take a very definite stand in favor of contraceptive measures, even granting that in many instances they are employed for so-called selfish purposes. That the sexual function is given to man not alone for procreative purposes is evidenced by the fact that in the male it continues to the sixtieth or sixty-fifth year, far beyond the child-bearing period of the woman, and it is this that holds the couple together and makes them congenial in the later years of life.

The proponents of this movement are women and the applicants for contraceptive advice are, for the most part, women who have become worn out by frequent pregnancies and births and are seeking relief, which I think they ought to have.

The question of the virility of various nations has been introduced, as evidenced by the results of the late World War. France as a natiion has practiced contraception for many years, yet she stood like a rock, where as the other nations collapsed in the order of this fecundity. Holland has had birth control for many years and who will say that it is a decadent nation?

I am a firm advocate of birth control also for economic reasons. In those families where by contraceptive measures the number of children is limited and hence properly spaced, there is a better chance for them to be more adequately fed and clothed and educated, whereas the converse is true in large families.

In the making of neurotics, we must not overlook the fact that a lack of knowledge as to proper contraceptive measures may play a major part.

It is interesting to note, in this connection, that at a recent meeting in Chicago, a certain religious organization which has hitherto banned the practice of birth control measures among its members, took the stand of encouraging utilization of that period of the monthly cycle during which many women are sterile. This may not be true in every instance, but in a certain group of women who have a normal cycle of twenty-eight days, the seventh and the nineteenth days are the only times when she can become pregnant. It is certainly worth trying where no other contraceptive measures are permitted.

I do not believe that birth control or eugenics have anything to do with the production of individuals of outstanding character or genius. Genius is probably the result of some fortuituous union of chromosomas which is just as likely to occur in a small family as in a large one.

**J. R. Peabody:** I think contraceptive measures are usually employed, not so much for selfish purposes, as because, in some families at least, children come so close together that the mothers are unable to give them proper time and attention, and they want to know what to do to avoid this. As I understand it, the birth control clinic is intended to help such women, whether they be rich or poor.

A case in point that comes to my mind, is that of a farmer's wife who recently gave birth to her fifteenth child, and she is a physical wreck. She does all her own housework and tries to send the children to school regularly, but when they get to the sixth or seventh grade they have to stop school and go to work on the farm. They are good Catholics and would probably not make use of contraceptive measures if they knew how. There are thousands of similar cases and it does appear that something should be done to help these poor women.

**W. E. Gardner:** Dr. Fulton's paper is essentially conservative and while I agree in the main with what he has said, I cannot help but appreciate the force of Dr. Louis Frank's remarks. That Dr. Frank is something more than a surgeon—a man of wide knowledge and broad views, tempered by a certain amount of conservatism, is evidenced by his excellent discussion of this subject.

If it were always a perfectly easy matter to determine when and to what extent birth control should be practiced or sterilization employed I am sure we would all be in hearty accord in our advocacy of such measures. In certain defective individuals with criminal tendencies, and especially in families showing a distinct epileptic trend, sterilization is unquestionably indicated, but we have no means of knowing how many statesmen, presidents of great corporations, and the like, are lost to the world by the practice of sterilization and contraception. We know that a certain percentage of children

even in a large family of defectives may be normal, according to the Mendelian law, if one parent be normal.

The American Society for Birth Control has been in existence for several years and the American Society of Social Hygiene has been also an advocate of birth control in well selected cases. The support of these national organiztions has given this whole subject a certain position of dignity and popular approval which had not prevailed previous to the activities of these societies.

I do believe that dissemination of information as to contraceptive measures will prevent many criminal abortions, which in itself is a most potent argument in favor of it. Also the prevention of neuroses. It is pretty generally recognized that the anxiety neuroses frequently have their origin in sexual excitement without adequate outlet, especially in the abscence of some form of sublimation which absorbs the instinctive drive of the individual.

As was indicated by a previous speaker, when the best people get behind a movement of this kind it usually goes over, and I believe it is going over in Louisville and that it will do some good, but it is also bound to result in some harm, especially if it cannot be kept in the hands of the doctors. As Dr. Hibbitt has pointed out, free contraceptive advice may be obtained at almost any drug store and this will inevitably lead to abuse. To prevent this abuse and to be of real benefit, the giving of contraceptive advice must be controlled by the medical profession.

**L. Wallace Frank:** Dr. Gardner has sounded the keynote of the subject of birth control when he says that the giving of contraceptive advice must be taken out of the hands of drug stores, with their advertisements of whirling sprays, fountain syringes, and various types of pastes and jellies, and placed in the hands of the medical profession where it belongs and where it will be given only to those individuals who should have it.

We have heard a great deal tonight about modern civilization and the underlying instincts of the human animal, but the fact remains that there are two primal laws, the first of which is self-preservation and the second self-propagation, and neither of these will ever be eliminated. Man, the only animal supposed to posses the ability to think, is also the only animal that indulges in sexual intercourse for pleasure. Other animals, apparently exercise that function only for the purpose of procreation, and mating in animals is usually confined to the estrus period, whereas man has been taught that woman is unclean during the menstrual period and no intercourse is had while it continues.

Civilization has also taught us to take care of crippled and defective offspring, individuals who should and would die in the natural course of events if they were not taken care of. If we were what would be considered barbarous enough to allow such individuals to succumb, the world would be better off and would never become over-populated. On the contrary, however, we build and maintain asylums for the insane, institutions for the feeble-minded, homes for the cripples and incurables, individuals who would otherwise be eliminated in due course by Nature, leaving only the fit to survive. Bringing these defectives to the age of puberty and permitting them to propagate will necessarily, in the course of time, produce an inferior race.

Those who should have contraceptive advice and would benefit most from it are the ones that do not get it. Intelligent people need no advice from doctors concerning contraceptive measures. Various contraception methods have been in use among such people since long before this birth control movement was started; it is among the lower classes that social and economic reasons for birth control really exist, and they are the ones this movement is intended to reach.

Under the present scheme of things the abortionist has his place, because illicit sexual relationship is going to continue whether we want it to or not, and many families would today be " on the rocks," not financially but mentally, were it not for the abortionist. With a wider knowledge of contraceptive measures, many of these abortions, with their attendant high mortality rate, will be avoided.

I think Dr. Fulton's paper is most conservative and that he has taken the only logical position that any present-day practitioner of medicine can take on the subject.

**C. D. Enfield:** I have thoroughly enjoyed Dr. Fulton's paper and the ensuing discussion, but I would much rather have heard this subject discussed by the same number of reasonably intelligent women under forty years of age; I think it would have been much more to the point.

When we stop to think of the various contraceptive pastes and jellies openly advertised by the drug stores, and the booklets on birth control, feminine hygiene, etc., which they freely distribute, we realize that this discussion is largely academic, because any one with the inclination and a dollar and a half can get all the contraceptive advice and materials they want.

**Gavin Fulton,** (in closing): Both Dr. Louis Frank and Dr. Sherrill have muddied the waters somewhat, having apparently misconstrued the idea sought to be conveyed by the paper. Unquestionably, contraceptive advice, whether for economic, pathological or medical reasons, should be absolutely and entirely in the hands of the medical profession. The question of abortion plays no part. The woman who is already pregnant had no place in my paper or in

my thoughts. Furthermore, the idea of contraceptive advice to contribute to the pleasure of the individual, or to prevent their ever having any children was not contemplated.

Contraception as advised at the clinic is an absolutely harmless procedure, purely temporary, does not lead to sterility, and can be discontinued at any time without any damage having been done. It is not given for the purpose of assisting married people to escape the responsibilities of parenthood. The intelligent and privileged classes have known and practiced contraceptive measures throughout the ages; they do not enter into the question. The object of this movement is to protect the under-educated and under-privileged women, grouped for the most part in that portion of the city where most of the charity work is done—women who have borne from four to nine children and are being taken care of by public charity. In many instances the husband is out of work and has nothing to do but lay around the house and gratify his desire, the woman being purely receptive. She has done her share in the way of propagation and should be protected against further pregnancies. One of the basic rules of the clinic is that contraceptive advice shall be given only to women who have borne several children.

I can see but one side to this question. The only weak point is that the movement has been taken up by the lay public rather than by the medical profession. In the last thirty years the public has been taught many things it never knew before; it has been educated in matters of sanitation and hygiene, the prevention and cure of cancer, and many other things, and if it is all right for the public to be taught these things I see no reason why it should not be taught birth control, which is of the greatest importance under certain conditions.

I am convinced that every young couple upon starting out in life together should be taught and advised to use contraceptive measures until it has been demonstrated that they are going to stick together, and then it is all right to have children. I have in mind a young couple that split after fifteen months of married life, and now the girl is turned loose with a three-months old baby on her hands to do the best she can with the remainder of her life. The use of contraceptive measures would have avoided this, and we have all seen countless cases of the same kind.

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**Dislocations and Fractures of Cervical Vertebrae.**—Mackh reports forty-eight cases of fractures and dislocations of cervical vertebrae treated at the Marine Hospital of Hamburg between 1921 and 1932. The material is divided into partial and complete fractures.

## EPIDEMIC ENCEPHALITIS*

GUSTAVE EITH, M. D.

Newport.

Epidemics of Encephalitis have been observed since the influenza pandemic of 1889. It appeared in Roumania in 1915, and along the western front in France, in 1917, usually associated with or following other infections. It was to cases of this type that the diagnosis of encephalitis lethargica was applied. These outbreaks occurred in winter or early spring, were usually accompanied by eye symptoms and were very frequently followed by distressing mental and physical sequelae. This type of winter encephalitis has been designated as epidemic encephalitis type A.

In the summers of 1913 and 1918, and again in 1925, there occurred in certain isolated districts in Australia a disease of the central nervous system which was definitely distinct from poliomyelitis and which in many respects resembled this disease as seen in the United States during the past summer. Several outbreaks have occurred in Japan, beginning in 1871 and continuing to reach rather epidemic proportions during the period of 1924 to 1929. The Japanese epidemics have shown the very sharp seasonal incidence of type which occurred in St. Louis, and now designated as epidemic encephalitis type B.

I will now endeavor to describe the two types above mentioned:

Epidemic Encephalitis, Type A. Incidence.

1. Age—No age is exempt. Incidence greatest however between 25 and 45 years of age.

2. Season—Most common during winter months.

3. Sex—Three males are attacked to two females.

4. Occupation and environment have no influence.

5. Race—Foreign born have relatively higher incidence.

Etiology and Mode of Transmission.

Causative agent is unknown. A virus-like substance of a symbiotic nature is most likely the causative agent because of the frequency of epidemic encephalitis following infection during winter months.

Mode of transmission is unknown. High incidence among physicians favors the human contact theory.

Pathology: Numerous minute hemorrhages are seen in the brain substance with greater abundance in the basal ganglia, midbrain, and pons. There is also evidence of diffuse toxic and degenerative changes.

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*Read before the Campbell-Kenton County Medical Society.

Incubation Period: Is believed to be about two weeks.

Symptoms and Signs: Three main stages of epidemic encephalitis type A are now generally recognized;

1. The first or acute stage appears after certain prodromal symptoms, seen as local manifestations of disease in the ear, the nose, or the throat, have been in evidence for from a few days to three weeks. In this acute stage two sets of syndromes appear most frequently; First, the typical somnolent—ophthalmoplegic syndromes consists of a brief initial stage with fever followed by drowsiness and eye muscle paralysis. Fever may be slight, severe or absent. Eye muscle disturbances are peculiar since they may be unilateral or bilateral, total or partial, transitory, and very changeable from day to day. Vertigo, nystagmus, facial weakness, headache, and respiratory disturbances are often associated. Second, the irritative-hyperkinetic syndromes of the acute stage are characterized by pathological purposeless movements following an initial stage of fever and excitement.

2. The second or psychoneurosis-like stage. After the symptoms of the acute stage have died down many patients continue to show for weeks, months, or even years, symptoms that suggest neurasthenia, psychasthenia, hysteria, or anxiety neurosis. Subjective complaints of headache, dizziness, insomnia, irritability, and restlessness are presented.

3. The third or myastatic stage. This stage may appear directly after the first or acute stage but in a majority of cases there is an interval varying in duration from one month to several years. These cases are often spoken of as instances of Parkinsonism. One of the earliest symptoms to appear is the mask-like face and the loss of expressive movements in the face. Stiffness of the neck muscles and of the muscles of the extremities may soon follow. Spontaneity of movement is much diminished. The speech becomes low and monotonous. Tremor may or may not be present. Drooling and seborrhea are often present.

Laboratory Findings:

1. The spinal fluid may be normal but often there is a slight increase in the cell count, and an increase in globulin and sugar content.

2. The blood picture showed only a mild leucocytosis (10 to 12 thousand).

Mortality: Ranges from twenty to thirty per cent of cases.

Epidemic Encephalitis, Type B. Incidence.

1. Age—No age is exempt but incidence is much higher in older age group, i. e., above 35 years of age.

2. Season—Occurs only during the summer months.

3. Race, sex and environment play no part whatever.

Etiology and mode of transmission are unknown.

Mosquitoes as vectors unlikely. Attempts were made to transmit encephalitis from human cases in St. Louis to twenty-three male adults by means of different species of mosquito. All efforts were unsuccessful.

Pathology: Pathologically the lesions are of the same nature but are at a higher level and more diffused than in type A, the cortex is involved and there is no tendency toward special localization in the central nervous system. Congestion of the brain and numerous small hemorrhages are found throughout its substance with areas of cell infiltration especially about the vessels.

Incubation Period appears to be from five to twelve days. Average nine days.

Symptoms and Signs: The clinical picture is that of a general febrile disturbance, often with gastro-intestinal symptoms such as vomiting, constipation or diarrhea; evidences of cerebral involvement with an apathetic or immobile facial expression, usually somnolence, stupor, coma or delirium; usually a moderately stiff neck with headache, which are often the first and most pronounced symptoms, and other pains, as of the abdomen and legs; tremor and catatonic semi-rigidity are common in the more severe cases. Tendon reflexes such as those of the elbow, knee, ankle, and superficial abdominal reflexes tend to be irregularly diminished or absent, and to vary from day to day. There may or may not be a Kernig's sign. Some patients are very restless and have to be restrained. Irregular paralysis may occur, and hemiplegia, usually transient, is not uncommon. The triad of symptoms is a febrile course, evidence of cerebral involvement, and mild meningeal signs. The duration of the febrile stage is irregular, the temperature may be normal in a few days. Probabilities as to sequelae cannot be stated at present. The milder cases which have recovered so far are apparently restored to good health. Findings of a series of fifty cases on discharge from the hospital consisted of: (a) disturbance of psychic function in some; (b) tremors of various types were present in many; (c) the deep reflexes were altered in all; (d) muscle tonus was disturbed in some; (e) and the cranial nerves showed residual involvement in many. By February, 1934 no sequelae had been noted in the St. Louis cases.

Laboratory Findings:

1. Spinal fluid. There was an increased cell count in ninety-six per cent of cases the count varying from zero to eight hundred.

Globulin and colloidal gold reactions are variable. Cell counts decrease markedly toward the termination of the disease.

2. Blood count may be normal or considerably elevated. The most usual being a very slight leucocytosis. The Schilling differential in most cases showed a decided shift to the left, often with a marked decrease in the lymphocytes.

Mortality: About twenty per cent of the St. Louis cases reported were fatal which is in contrast to a fifty to sixty per cent case fatality rate in Japan. Both morbidity and mortality rates were higher in older age groups.

Treatment: In the treatment of epidemic encephalitis there are no blanket rules. The treatment must be approached with the form of encephalitis clearly in mind and preceded by laboratory investigations.

Treatment of the acute stage—In addition to the general dietetic-hygienic care common to the treatment of all acute infections, efforts should be made (1) To kill or attenuate the virus by direct attack with virocidal remedies. (2) To increase the powers of natural resistance of the patient against the infection. (3) And to ameliorate the symptoms that are troublesome to the patient.

The attempts thus far made to kill or to attenuate the virus have been unsatisfactory. Intravenous injections of urotropin, sodium salicylate, mercurochrome, colloidal silver preparations and acriflavin have given only an occasional improvement.

The best results in the acute stage appear to have followed the injection of convalescent serum—twenty to sixty cubic centimeters of such serum being injected intravenously, intramuscularily, or into the subarachnoid space. Various serums have been used including (1) Rosenows encephalitis anti-streptococcic serum, (2) Gay's herpes hyperimmune rabbit serum. and likewise vaccines of various types with only occasional success.

For control of symptoms, sedatives, hypnotics, and analgesics, as phenobarbital, bromides, amytol, and chloral hydrate may be used. Increased intracranial pressure may be reduced by (1) lumbar puncture, (2) twenty-five per cent dextrose solution intravenously and (3) Sodium iodide intravenously. Treatment frequently used is that of giving two hundred and fifty cubic centimeters of twenty-five per cent glucose intravenously following with lumbar puncture four hours later.

In post-encephalitic Parkinsonism the rigidity can be greatly diminished by administration of scopolamin hydrobromide. It is best to begin with one two hundredth of a grain, gradually increasing until symptoms are relieved. As much as one one-hundredth or one-fiftieth of a grain may be given two or three times daily. Alternatives are atropin or belladonna, nicotine and coniin. Physiotherapy can be used, especially in the form of hydro-therapy massage and stretching exercises. Psychotherapy is likewise frequently used.

## PRURIGO NODULARIS, REPORT OF CASE*

Winston U. Rutledge, M. D.
Louisville.

Patient, female, colored, aged 48, seen in the dermatological clinic at the City Hospital. She is not a full-blooded Negress, her maternal grandfather having been an Indian.

This woman presented skin lesions on her arms and legs, and a few on the trunk, which she said had been present for forty-five years, the first lesion having appeared on her forearm when she was three years old, and that gradually new lesions had appeared on the hands, palms, legs and trunk. She had been treated for these lesions at various times but no one appeared to know what they were, treatment having been directed toward the relief of the intense itching. She said the greatest benefit had resulted from injections of salvarsan some ten years ago. Some doctor gave her about twenty injections, following which some of the lesions did not itch for a year, and then the itching returned.

Upon examination I found her hands studded with pea-size, elevated, hard, infiltrated, almost cartilaginous-like nodules, the surfaces covered with hyperkeratotic skin. They looked very much like warts. Three or four hundred of these lesions were scattered over her body—on the palms of the hands and soles of the feet, in the scalp and on the legs and trunk.

This woman has a condition that was first described by a man named Hardaway about fifty years ago, as prurigo nodularis. Since that time, and particularly since 1900, a number of these cases have been reported in this country and Germany. Several years ago in New York I saw a similar case occurring in a white woman who had only three or four of these nodular lesions on her legs.

The cause of the condition is not known and the treatment is unsatisfactory. The only effective treatment is to cut the lesions out. Sometimes they stay away and sometimes they recur at the site of removal. The prognosis is bad. The lesions itch intensely and nothing we know of will relieve the itching permanently. Suberythema doses of x-ray will some times give temporary relief.

*Read before the Louisville Medico-Chirurgical Society.

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NEXT MEETING HARLAN, OCTOBER 1-4, 1934


## COUNTY SOCIETY REPORTS

**Letcher:** The Letcher County Medical Society assembled Tuesday night, April 24th, at 7:30 P. M. here in Whitesburg. The following physicians were present:

T. M. Radcliffe, President, Kona; B. F. Wright, Seco; B. C. Bach, Whitesburg; H. R. Skaggs, Fleming; C. C. Sparks, (New member) Cromona; Owen Pigman, Farraday; J. E. Crawford, Whitesburg; R. Dow Collins, Whitesburg.

The meeting was called to order by the President, Dr. Radcliffe. The paper assigned for this meeting was "Treatment of Pelvic Disorders," which was given by Dr. B. F. Wright; the subject matter was both interesting as well as instructive. The members assigned to open the discussion failed to appear, therefore the President called for volunteers,—practically every doctor present had some beneficial comment to make on this important subject.

After some important business matter was disposed of the Society adjourned till the May meeting.

R. DOW COLLINS, Secretary.

**Graves:** The Graves County Medical Society met in Hall Hotel, April 10 and elected the following officers for the year 1934: E. A. Stevens, Mayfield, President; W. H. Fuller, Mayfield, Vice-President; H. H. Hunt, Mayfield, Secretary-Treasurer; H. H. Hunt, Mayfield, Delegate; H. V. Usher, Mayfield, Alternate.

H. H. HUNT, Secretary.

**Mason:** A special meeting of the Mason County Medical Society was called by the President for Wednesday, May 2, 1934, at 4:00 P. M. The purpose for which this meeting was called was to hold a neuro-leutic clinic and to hear Dr. A. R. Vonderahe lecture.

Dr. Vonderahe and a friend, a Dr. Morgan, Professor of Anatomy at the University of Cincinnati Medical College, arrived about 4:00 P. M. and three patients were carefully and completely examined. Spinal tests had previously been made of these. One test was only two plus Wassermann, and this boy had taken treatment faithfully for three years. Dr. Vonderahe found him in very good condition. The other two had paretic colloidal gold curves and four plus Wassermanns and clinically showed all the signs of an approaching paresis. One had been taking treatment for only a short time and was improving, but the other had taken treatment for three years and was not responding, so it was advised that he be taken to a hospital and given malaria treatment.

After dinner at the Navarre Hotel, a lecture on brain conditions was heard. This was illustrated with lantern slides made from photographs of gross brains from autopsies performed

by Dr. Vonderahe. The lecture was instructive and most unique.

The following members attended: W. E. Hord, C. V. Stark, A. R. Carrigan, W. G. Phillips, A. R. Quigley, and Allen F. Murphy.

ALLEN F. MURPHY, Secretary.

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**Grant:** The regular meeting of the Grant County Medical Society was held in Williamstown, Ky., at the office of the Health Department, April 18, 1934, at 7:30 P. M. with the following members present: Drs. J. D. George, A. D. Blaine, N. H. Ellis, C. M. Eckler, and C. A. Eckler. Minutes of last meeting were read and approved and all communications were acted upon and dispensed with.

The communications from the Cancer committee offering us a free lecture course at a one day meeting on Cancer of the Uterus was accepted and the Secretary ordered to arrange for this at our next meeting the third Wednesday in May. This will be an interesting meeting and all doctors should attend. We hope to have a number of visiting brothers at this meeting.

Dr. Louis Wallace Frank of Louisville, Ky. one of Louisville's most able men, is chairman of this Cancer committee and we know it is worth while.

There were a number of interesting case reports made and we hope that the members who were absent, will make a resolution to attend future meetings. We now adjourned to meet the third Wednesday in May at the usual hour.

C. A. ECKLER, Secretary.

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**Mason:** The regular meeting of the Mason County Medical Association was held in the offices of the Mason County Health Department, Wednesday night, May 9.

The meeting was called to order by the President, W. E. Hord, at about 9:00 P. M. Our guest speaker of the evening, Dr. J. Hofbauer, was at once introduced and proceeded to give us a very thorough, detailed, and instructive lecture, illustrated with lantern slides, on "The Early Diagnosis and Etiology of Uterine Carcinoma." This was the most complete lecture of its kind that has ever been presented. The histological side was gone into, followed by the pathological side, and each phase was carefully described and lantern slides shown, showing everything in detail; in fact, there was not a thing omitted.

Dr. Hofbauer is from the Vienna School, has held several professorships on the continent, and was just recently Associate Professor of Gynecology and Obstetrics in Johns Hopkins. He is now practicing his specialty in Cincinnati and, indeed, the Society felt very fortunate in being able to have Dr. Hofbauer come to Maysville and lecture to us.

The following members and visitors were present: W. E. Hord, W. G. Phillips, A. O. Taylor, A. R. Quigley, L. H. Long, W. S. Yazell, and Allen F. Murphy of Maysville; H. M. Yancy of Mayslick, N. D. Colvin of Germantown, members. J. M. Blades of Butler, O. W. Brown of Falmouth, S. A. Lauphlin of Aberdeen, Ohio, and Maurice Hyman of Cincinnati, Ohio, visitors.

ALLEN F. MURPHY, Secretary.

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**Adair:** The Adair County Medical Society met at the offices of the Adair County Health Department at 7:30 o'clock on May 2, 1934. The following physicians attended: J. C. Gose, O. L. Conrad, L. C. Nell, W. J. Flowers, B. J. Bolin, S. P. Miller, and N. A. Mercer.

The following officers were elected for the year: B. J. Bolin, Columbia, President; N. A. Mercer, Columbia, Secretary and Treasurer, and S. P. Miller, Columbia, Delegate to the State Medical Meeting.

At a date to be selected in June, the Adair County Medical Society will be host to the Tri-County Medical Society.

The annual meeting of the Adair County Medical Society will be December 3, 1934.

N. A. MERCER Secretary.

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**Rockcastle:** The Rockcastle County Medical Association held its regular monthly meeting in the court house at Mt. Vernon, Thursday, May 17, 1934.

The meeting was opened promptly at 7:30 P. M. by the President, Dr. R. G. Webb, of Livingston, and gave the objects of the business meeting; The Exchange of Accounts by doctors and to revise our Schedule of Fees.

On the calling of the roll all the doctors of the Society answered present. Following the roll call each doctor present was called on to express his personal view and opinion on the merits of doctors exchanging their lists of accounts and a regular Fee revision, but more especially to exchanging lists of delinquent accounts.

A motion was made by Dr. Lewis and seconded by Dr. McWilliams, that a committee of three be appointed to write a reasonable and workable system for the doctors of Rockcastle County to readily ascertain the reliability of their various patients and to revise the fees for a reasonable system.

The following doctors were appointed on this committee: Drs. Baker, Pennington and Chestnut.

The motion was then made and seconded that we meet next in the court house in Mt. Vernon on June 14, 1934 at 7:30 P. M. The meeting was then adjourned.

LEE CHESTNUT, Secretary.

## BOOK REVIEW

SURGICAL CLINICS OF NORTH AMERICA: (Issued serially, one number every other month.) Volume 14, 1. (Philadelphia Number—February 1934) 226 pages with 62 illustrations. Per Clinic Year (February 1934 to December 1934) Paper, $12.00; Cloth, $16.00 net. Philadelphia and London: W. B. Saunders Company, 1934.

This volume contains reports of eighteen Pennsylvania surgeons on unusual cases of various types in all branches of surgery.

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CRITERIA FOR THE CLASSIFICATION AND DIAGNOSIS OF HEART DISEASE. By the Criteria Committee of the Heart Committee of the New York Tuberculosis and Health Association, Inc. Joseph H. Bainton, M. D., Robert L. Levy, M. D., Arthur C. DeGraff, M. D., Harold E. B. Pardee, M. D., Chairman. Approved by the American Heart Association. Third Edition. New York Tuberculosis and Health Association, New York. MCMXXXII.

For the most effective study of any kind of disease and in order that people working in different places may know that they are using the same terms for the same conditions, it is necessary to establish precise methods of labelling. This necessitates two things: (1) uniformity of nomenclature and (2) uniform criteria for using the nomenclature. Such labels, or nomenclature, should as far as possible be descriptive and descriptive only of the conditions which they indicate. The criteria should be precise definitions of the states named in the nomenclature.

To meet this demand with respect to heart disease the Committee on Cardiac Clinics of the Association for the Prevention and Relief of Heart Disease, the predecessor of the Heart Committee of the New York Tuberculosis and Health Association, prepared in 1923 a nomenclature covering diseases of the heart and blood vessels which it adopted and introduced into its various clinics. With certain changes this nomenclature was later adopted by the American Heart Association and has been used with success in all parts of the country.

Many individuals using a nomenclature in different localities must have the same idea as to what a given label indicates if a uniform nomenclature is to achieve its purpose. This is all the more essential if statistical studies are to be made.

While an effort has been made above to explain the raison d'etre for this book, a very important service which we hope it will also serve will be as a manual for physicians to be used by them as an aid in diagnosis. Prepared as it has been by experts in heart disease these criteria are an extremely practical guide for correct diagnosis, and since proper management and treatment depend on correct diagnosis, its usefulness to the physician specially interested in heart disease should be great.

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SIMPLIFIED NURSING, By Florence Dakin, R. N. Inspector of Schools of Nursing, State of New Jersey. J. B. Lippincott Company, Publishers. London, Montreal, and Philadelphia.

The object of this book is to present the rudiments of nursing in a simple, definite form, technically correct. The methods therein explained may be easily, safely and accurately carried out by the home nurse (mother, wife or member of the family) by the practical nurse and by the trained attendant. The arrangement of the lessons is also well adapted for use in High School classes in Home Nursing.

An extensive experience covering more than twenty years has proved to the author the necessity for definite teaching to all those who have the care of the sick and yet who have not taken a regular course in Schools of Nursing. It is to meet this need that this book has been written.

The matter is presented in the form of Lessons which follow a general plan of "Definition," "Explanation," and "Instruction," with "Caution," "Safe-guard," and "Note" where necessary. By the careful study of these Lessons the inexperienced nurse or the attendant will be enabled to understand the object for which the procedures are intended and the principles through which this object is obtained. The instructions are given step by step, with full and complete notes designed to make the text clearer, or to refer to additional methods, suggestions, etc. The cautions call attention to the danger points, and the safe-guards are preventive measures which eliminate many possible mistakes. Simple equipment for home use is described under substitutes and all difficult or technical words are pronounced and defined in the text, thus avoiding a constant reference to Glossary or Index. Preceding each lesson in Chapters Two and Three, is a brief and exceedingly elementary Preliminary Discussion on the anatomy and physiology or the bacteriology relative to the specific lesson.

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*Annual Meeting, Harlan, October 1-4, 1934*

# KENTUCKY MEDICAL JOURNAL

Published Monthly by the Kentucky State Medical Association Under the Supervision of the Council

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Editorial and Business Offices, 519 Tenth Street. Subscription Price, $5.00; Single Copy, 50 cents.
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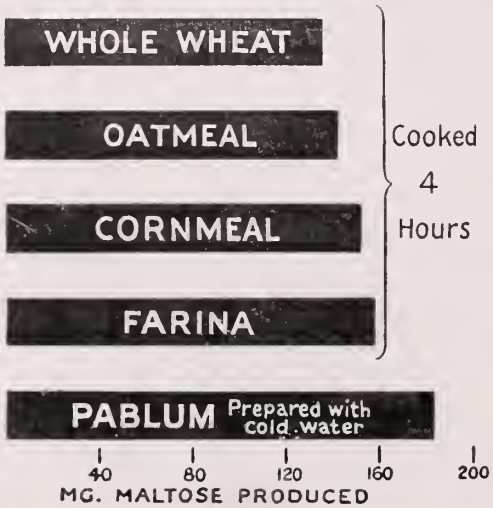


140 X STAINED (INSET) 290 X. STAINED

*Large photomicrograph:* Pablum mixed with cold water—portion of large flake. Pablum flakes are honeycombed with "pores" or air-spaces (note light areas). This porosity permits ready absorption of digestive fluids by the entire flake. No starch granules appear—they have been completely ruptured.

*Inset:* Farina cooked ½ hour—clump of tissue including starch granules. Note density of clump and lack of porosity. Many starch granules, such as are present in raw cereal, remain unchanged in form.

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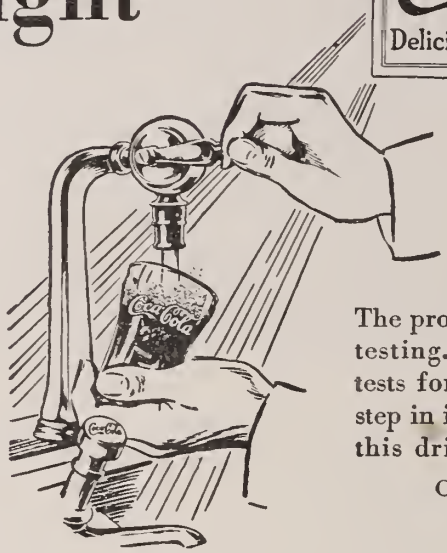
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| COUNTY | SECRETARY | RESIDENCE | DATE 1934 |
|---|---|---|---|
| Adair | N. A. Mercer | Columbia | August 1 |
| Allen | A. O. Miller | Petroleum | August 22 |
| Anderson | J. B. Lyon | Lawrenceburg | August 6 |
| Ballard | F. H. Russell | Wickliffe | August — |
| Barren | Paul S. York | Glasgow | August 15 |
| Bath | H. S. Gilmore | Owingsville | August 13 |
| Bell | J. G. Foley | Pineville | August 10 |
| Boone | R. E. Ryle | Walton | August 15 |
| Bourbon | W. B. Hopkins | Paris | August 16 |
| Boyd | R. G. Culley | Ashland | August 7 |
| Boyle | P. C. Sanders | Danville | August 14 |
| Bracken | J. M. Stevens | Brooksville | August 6 |
| Breathitt | O. M. Goodloe | Jackson | August 21 |
| Breckinridge | L. E. Kincheloe | Hardinsburg | August — |
| Bullitt | S. H. Ridgeway | Shepherdsville | August — |
| Butler | G. E. Embry | Morgantown | August 1 |
| Caldwell | W. L. Cash | Princeton | August 7 |
| Calloway | A. F. Russell | Murray | August 2 |
| Campbell-Kenton | Luther Bach | Bellevue | August 2-16 |
| Carlisle | J. W. Payne | Bardwell | August 7 |
| Carroll | J. M. Ryan | Carrollton | August — |
| Carter | R. G. Townsend | Grayson | August 14 |
| Casey | Wm. J. Sweeney | Liberty | August 23 |
| Christian | M. A. Gilmore | Hopkinsville | August 21 |
| Clark | R. H. Scobee | Winchester | August 17 |
| Clay | J. L. Anderson | Manchester | August 14 |
| Clinton | S. F. Stephenson | Albany | August 18 |
| Crittendon | C. G. Moreland | Marion | August 13 |
| Cumberland | W. F. Owsley | Burkesville | August 1 |
| Daviess | I. A. Thorpe | Owensboro | August 14-28 |
| Elliott | | | August — |
| Estill | Walter Cox | Irvine | August 8 |
| Fayette | John Harvey | Lexington | August 14 |
| Fleming | J. B. O'Bannon | Flemingsburg | August 8 |
| Floyd | E. E. Martin | Allen | August 10 |
| Franklin | W. S. Snyder, Jr. | Frankfort | August 2 |
| Fulton | Glynn F. Bushart | Fulton | August 8 |
| Gallatin | J. M. Stallard | Sparta | August 16 |
| Garrard | B. Earl Caywood | Lancaster | August 16 |
| Grant | C. A. Eckler | Dry Ridge | August 15 |
| Graves | H. H. Hunt | Mayfield | August 7 |
| Grayson | C. F. Blankenship | Leitchfield | August 30 |
| Green | S. J. Simmons | Greensburg | August 6 |
| Greenup | Carl M. Gambill | Greenup | August 10 |
| Hancock | F. M. Griffin | Hawesville | August 6 |
| Hardin | D. E. McClure | Elizabethtown | August 9 |
| Harlan | Clark Bailey | Harlan | August 25 |
| Harrison | W. B. Moore | Cynthiana | August 6 |
| Hart | S. F. Richardson | Munfordville | August 7 |
| Henderson | Walter O'Nan | Henderson | August 13-27 |
| Henry | Owen Carroll | New Castle | August 27 |
| Hickman | Chas. Hunt | Clinton | August 2 |
| Hopkins | David L. Salman | Madisonville | August 2 |
| Jackson | | | August 4 |
| Jefferson | Chas M. Edelen | Louisville | August 6-20 |
| Jessamine | J. A. VanArsdall | Nicholasville | August 23 |
| Johnson | P. B. Hall | Paintsville | August 11 |
| Knott | M. F. Kelley | Hindman | August 25 |
| Knox | F. R. Burton | Barbourville | August 24 |
| Larue | D. W. Gaddie | Hodgenville | August 7 |
| Laurel | Oscar D. Brock | London | August 8 |
| Lawrence | W. C. Gose | Louisa | August 20 |
| Lee | A. B. Hoskins | Beattyville | August 11 |
| Leslie | John H. Kooser, Acting Secretary | Hyden | August — |
| Letcher | R. Dow Collins | Whitesburg | August 28 |
| Lewis | J. D. Liles | Vanceburg | August 20 |
| Lincoln | Lewis J. Jones | Houstonville | August 17 |
| Livingston | Wm. C. Davis | Salem | August — |
| Logan | Walter Byrne, Jr. | Russellville | |
| Lyon | H. H. Woodson | Eddyville | August 7 |
| McCracken | Leon Higdon | Paducah | August 8-15 |
| McCreary | R. M. Smith | Stearns | August 6 |
| McLean | G. L. Thompson | Calhoun | August 9 |
| Madison | Hugh Mahaffey | Richmond | August 16 |

| COUNTY | SECRETARY | RESIDENCE | DATE 1934 |
|---|---|---|---|
| Marion | W. C. Griffey | Lebanon | August 21 |
| Marshall | S. L. Henson | Benton | August 15 |
| Mason | Allen F. Murphy | Maysville | August 8 |
| Meade | A. A. Baxter | Brandenburg | August 25 |
| Menefee | E. T. Riley | Frenchburg | August — |
| Mercer | J. Tom Price | Harrodsburg | August 14 |
| Metcalfe | P. W. Bushong, Acting Secretary | Edmonton | August 7 |
| Monroe | Geo. E. Bushong | Tompkinsville | August — |
| Montgomery | D. H. Bush | Mt. Sterling | August 14 |
| Morgan | W. H. Wheeler, Acting Secretary | Betsy Sayne | August — |
| Muhlenberg | G. L. Simpson | Greenville | August 14 |
| Nelson | R. H. Greenwell | Bardstown | August — |
| Nicholas | T. P. Scott | Carlisle | August 20 |
| Ohio | Oscar Allen | McHenry | August 1 |
| Oldham | S. J. Smock | LaGrange | August 7 |
| Owen | K. S. McBee | Owenton | August 2 |
| Owsley | D. E. Wilder | Booneville | August 6 |
| Pendleton | W. A. McKenney | Falmouth | August 8 |
| Perry | R. L. Collins | Hazard | August 13 |
| Pike | M. D. Flanary | Pikeville | August 6 |
| Powell | I. W. Johnson | Stanton | August 6 |
| Pulaski | M. C. Spradlin | Somerset | August 9 |
| Robertson | | | August 20 |
| Rockcastle | Lee Chestnut | Mount Vernon | August 9 |
| Rowan | G. C. Nickell | Morehead | August 28 |
| Russell | J. B. Scholl | Jabes | August 13 |
| Scott | F. W. Wilt | Georgetown | August 2 |
| Shelby | W. E. Morris | Shelbyville | August 16 |
| Simpson | N. C. Witt | Franklin | August 14 |
| Spencer | | | August — |
| Taylor | W. B. Atkinson | Campbellsville | August 9 |
| Todd | B. E. Boone, Jr. | Elkton | August 1 |
| Trigg | H. L. Wallace | Cadiz | August 29 |
| Trimble | J. J. Gerkins | Bedford | August — |
| Union | D. C. Donan | Morganfield | August 29 |
| Warren | Hal Neal | Bowling Green | August 8 |
| Washington | J. H. Hopper | Willisburg | August 15 |
| Wayne | R. E. Teague | Monticello | August 2 |
| Webster | C. M. Smith | Dixon | August 31 |
| Whitley | C. A. Moss | Williamsburg | August — |
| Wolfe | G. M. Center | Campton | August 6 |
| Woodford | Chas. F. Voigt | Midway | August 2 |

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# KENTUCKY MEDICAL JOURNAL

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## THE HARLAN MEETING

Arrangements for the Annual Meeting of the Association at Harlan, October 1-4, are rapidly nearing completion. It is of interest that advance reservations by physicians of the State already exceed those of any previous annual session. The local committee at Harlan assures us that adequate provision has been made for housing and feeding all those who come. It has interested those of us who have been in Harlan recently that practically every citizen of this beautiful mountain city seems to consider himself a part of the Committee on Arrangements and is determined to demonstrate the high quality of mountain hospitality.

Doctor Pritchett has practically completed the scientific program and it promises to be of unusual interest. Complying with requests received from many physicians in the State, he has arranged for definite Round Table discussions, that will be of real practical value, in regard to recent developments in practice.

President-Elect Howard has appointed the reference committees of the House of Delegates and they are now engaged in active work. A new committee on Physiotherapy, of which Doctor Virgil E. Simpson is chairman, has been appointed at the suggestion of the House of Delegates of the American Medical Association. A special room adjoining the registration headquarters has been assigned the committee for an exhibit, that we are sure will be studied to advantage by every member in attendance. Doctor Simpson has also arranged for an exhibit in connection with the new Pharmacopoeia which will really offer an extensive postgraduate course in Materia Medica.

Those who have attended former annual sessions need no suggestion as to the value of such a meeting of minds. To those who have not heretofore attended them. we wish to say that such attendance has more value than any ordinary postgraduate course that is undertaken. From present appearances, the attendance will be larger than at any meeting ever held outside of Louisville. Our mountain members, who have attended sessions in every other section of the State, are expecting their friends to make the return visit almost unanimous.

## THE CLEVELAND MEETING

The eighty-fifth annual session of the American Medical Association which was held in Cleveland June 12th to June 15th was one of the most, if not the most, successful in the history of the Association. The high quality of the papers presented in each of the sixteen sections was generally commented upon. The Scientific Exhibit is deserving of especial mention. It occupied the entire floor of the large Cleveland Public Auditorium and consisted of movie demonstrations, lantern slide exhibits, physiological and pathological fresh and prepared specimens, apparatus, photographs and drawings of diseased conditions, etc. Dr. Gregory Schwartzman of Mt. Sinai Hospital, New York, was awarded the gold medal for the originality and excellence of his exhibit of individual investigation, which consisted of the skin reactivity to bacterial filtrates, its role in immunology and its practical application. The technical exposition occupied the vast basement of the Auditorium. The return of some of the "regulars" and the appearance of quite a number of new exhibitors added to the interest of the commercial display.

Numerically the 1934 session exceeded expectations. Even before the beginning of the section meetings the registration had reached 3597 and the last issue of the "Daily Bulletin" reported a total registration of 6111. As this did not include the registration of the last day of the meeting, it is a fair assumption that the attendance reached close to 7000 doctors. As the Auditorium housed all of the meetings the opportunity to attend the various section meetings in a selective way was quite convenient. The house of delegates have chosen Atlantic City for the 1935 session of the Association. Dr. James S. McLester of Birmingham, internist and professor of medicine in the Alabama School of Medicine, was elected President-Elect.

The Section on Ophthalmology was well attended, the register showing an attendance of 450. Although there was a varied program most interest centered on the discussion of the surgical treatment of detachment of the retina and of the management of concomitant squint. It was the consensus of the opinion of the members who took part in the discus-

sion that the surgical treatment of retinal detachment has come to stay. It is interesting to note the transcendence of the surgical procedure from the original igni-puncture of Gonin in which trephine openings were made in the selera in the region of the tear and the electro cautery applied to the present popular method of multiple diathermic punctures. As Gonin's method was followed by only a low percentage of successful reattachment, presumably on account of subsequent distortion and degeneration and at times hemorrhages of the choroid and retina, other methods have been suggested. Guist substituted for the electro cautery the application of potassium hydroxide to the trephine opening and rapid neutralization by means of diluted acetic acid and subsequent evacuation of the sub retinal fluid by puncture of the choroid, however the extent of the activity of the chemical cautery could not always be controlled. This procedure necessitates many trephinings, as did the Gonin operation. Even though better results have been reported than through the igni-puncture other procedures have been introduced. At present the popular surgical means of approaching detachment of the retina consists of diathermic treatment. Instead of making the many tedious trephine openings, multiple perforating punctures of the sclera are made with short diathermic needles over the area of detachment, causing coagulation of the underlying choroid. Contact of the choroid and retina is brought about by the punctures and a subsequent circumscribed choroiditis causes adhesional chorioretinitis, which seals the retinal tear. The advantages claimed for this procedure are the greater simplicity and brevity of the applications and the substitution of the smaller perforations of the electrodes for the larger trephine openings and the lessened danger of damaging the retina. From 30 to 200 milliamperes of current are employed in the electro coagulation, varying with the number of needles in the electrode.

Most conservative surgeons through improved technique gained by experience now report from 30 to 60 per cent successful reattachment of the retina following this operative procedure. The importance of localizing the retinal tear is still stressed by most operators, although this seems to be of less importance with this method as the diathermic punctures are given over a wider area than are the trephinings in the original method of treatment. The early recognition of the detachment and the early treatment is still considered essential to a successful outcome, though successes have been reported where the operation was done a year or more after the occurrence of the detachment. Careful after treatment and co-operation on the part of the patient is generally recognized as a most important factor in the ultimate outcome of these cases. Binocular bandage for ten to twelve days, then rest in bed for two or three more weeks is advocated.

In the discussion of the treatment of concomitant squint the importance of orthoptic measures received considerable attention. Many of the low degree squints, under 25 degrees, have been found to respond to orthoptic measures when properly applied. Even in the cases of more than 25 degree squint a short pre-operative period of orthoptic training is advocated by some, also a period of intensive fusion training after the operation. Clinics for orthoptic training are now in operation in some of the larger medical centers and the establishment of other clinics of this kind are being contemplated. Gratifying results are reported following the routine examination of the functional condition of the extrinsic ocular muscles and the institution of orthoptic training. This is especially true of cases of convergence insufficienees which so frequently interfere with the patient's ability to do close work comfortably. In the cases which fail to yield to muscle exercises or where only a partial improvement is noted, early surgical treatment was advocated by most speakers.

ADOLPH O. PFINGST, M. D.

## STATE DEPARTMENT OF HEALTH

Under the reorganization bill passed by the regular session of the General Assembly, the State Board of Health becomes the State Department of Health of Kentucky, and the State Health Officer becomes the State Health Commissioner. The law provides that the Board of Health of the Department of Health shall be constituted and appointed exactly the same way as has the State Board of Health heretofore. The State Health Commissioner will be elected by the Board and will serve as its Secretary.

The registration in the professions allied with medicine will be conducted by the same boards as heretofore, but those boards become divisions of the Department of Health. The Crippled Children's Commission also becomes a division of the Department, but will continue to function practically independently so long as it maintains its present high standard of service.

The medical profession of the State will continue to exercise the predominating control of the policies of the State Department of Health, as it has heretofore exercised such control through the State Board of Health.

The profession of the State is to be congratulated that the Governor, the members of his administration and the members of the

House and Senate were practically unanimous in their desire that the functions involving public health in Kentucky should continue to be administered along the same effective lines as heretofore.

## THE AMERICAN COLLEGE OF PHYSICIANS

The American College of Physicians will hold its Nineteenth Annual Clinical Session in Philadelphia, April 29-May 3, 1935.

Announcement of these dates is made particularly with a view not only of apprising physicians generally of the meeting, but also to prevent conflicting dates with other societies that are now arranging their 1935 meetings.

Dr. Jonathan C. Meakins, of Montreal, Que., is President of the American College of Physicians, and will arrange the Program of General Sessions. Dr. Alfred Stengel, Vice President in charge of Medical Affairs of the University of Pennsylvania, has been appointed General Chairman of local arrangements, and will be in charge of the Program of Clinics. Mr. E. R. Loveland, Executive Secretary, 133-135 S. 36th Street, Philadelphia, Pa., is in charge of general and business arrangements, and may be addressed concerning any feature of the forth-coming Session.

## REINFORCING THE CASE FOR SMALLPOX VACCINATION

In view of attacks to which scientific medicine is, these days, being subjected by charlatans, cults and "anti-everythings," peculiar timeliness attaches to an article* appearing in a recent issue of the Journal of the American Medical Association. Reporting the results of controlled vaccination experience in medical students, the authors, Daring and Rosenau, use these results to buttress the conclusion that the protection conferred by smallpox vaccination is a great deal more lasting than has been generally supposed. Two excerpts from the article are of peculiar interest:

"It is welcome news that immunity conferred by a single vaccination usually lasts longer than the traditional seven to ten years, and that the benefits conferred extend for twenty years or more in most individuals. Re-vaccination reinforces protection and, as our records here presented show, is usually a mild experience. Certainly nothing in these facts should alter the procedure of always vaccinating when exposed or in danger of exposure to smallpox.

"The situation with reference to smallpox is interesting. Vaccination of nine individuals with a history of smallpox who had never been vaccinated gave four primary takes, four accelerated takes and only one immediate reaction. Experience teaches that smallpox usually protects against itself; second attacks are rare. It does not, however, protect so well against cowpox, as our data show. On the other hand, experience in every epidemic of smallpox in which vaccinated individuals were exposed has demonstrated the powerful specific protection afforded by vaccination."

The fact has already been firmly established that, in nearly all cases, repetition of vaccination at intervals of from one to three years, or longer, will result in an "immediate" reaction which reaches its height within seventy-two hours. This "immediate" reaction consists merely of a small red papule, which may itch slightly, but usually passes unnoticed. It indicates, however, a high degree of immunity and probably stimulates the existing immunity to a great extent—as great, perhaps, as would be done by a "primary take." Frequent re-vaccinations will thus keep immunity at a high point and, at the some time, avoid the unpleasantness of another "primary take" in later years. The immediate reaction will, if carefully looked for, be found in every individual who is still immune. This fact probably accounts for the large percentage of "no-takes" usually reported on groups who have been previously vaccinated. Careful inspection of the arms of such individuals, after re-vaccination, will ordinarily show the presence of an immediate reaction.

In some cases, revaccination results in an "accelerated" reaction, reaching its height in from nine to four days, but not proceeding beyond the vesicular stage. This reaction is, in every way, comparable, in its immunizing effect, to a primary take, but avoids the pustular stage and the other more disagreeable symptoms which result in the latter.

The authors of the article referred to stress the warning that nothing in the findings reported by them should alter the procedure of always vaccinating or revaccinating when exposed or in danger of exposure to smallpox

*Dearing, W. P., and Rosenau, M. J.; J. A. M. A. 102:1998 (June 16), 1934.

**Inhibition of Agglutination in Retroplacental Blood.**—In tests on the intervillous blood and the amniotic fluid of pregnancies with foreign blood groups, Saker was able to determine that the decrease in the agglutinin titer of the retroplacental blood was the result of a specific inhibition by fetal antigen. However, there is no transition of fetal agglutinogens through the placenta into the retroplacental blood. The author thinks that the decrease in the specific agglutinin is due to an admixture of amniotic fluid, which cannot be avoided at the moment of the expulsion of the placenta.

## OFFICIAL ANNOUNCEMENTS

### Annual Meeting of the Eye, Ear, Nose and Throat Section

The 14th Annual Meeting of the Eye, Ear, Nose and Throat Section of the Kentucky State Medical Association, was held in the Kentucky Hotel, Louisville, Ky., on Thursday and Friday, May 17th and 18th, 1934.

#### Thursday, May 17th

#### Dinner Meeting

The Section and its guests, to the number of 52, assembled at dinner in the ball-room of the Kentucky Hotel at 7:00 P. M., after which Dr. S. B. Marks, retiring President, addressed the section on the subject, The Relation of the Sympathetic Nervous System as a Causative Factor in Atypical Neuralgia.

The guest of honor, Dr. Wiley R. Buffington, of New Orleans, La., delivered an address entitled, Recent Advances in the Classification, Etiology and Treatment of Some Important Diseases of the Conjunctiva.

#### Friday, May 18th

#### Business Session

The Section was called to order by the President, Dr. S. B. Marks, Lexington, at 9:30 A. M.

Minutes of meeting held in Paducah, Ky., May 15th, 1933, were read and approved.

Dr. Walter R. Dean, Louisville, Treasurer, submitted report of receipts and expenditures during the past year and upon motion, duly seconded and carried, the report was received and ordered filed.

#### Application for Membership

The name of Dr. Auryne E. Bell, proposed by Walter Dean and seconded by F. C. Thomas, was submitted and under the rules of the Section, was allowed to lie over to be voted upon at next meeting.

It was moved and seconded that election of officers be made a special order of business at the afternoon session, at 2:00 P. M. Motion carried.

#### New Business

Under this head the question of next year and subsequent years was introduced and fully discussed. It was moved by Dr. J. D. Williams, Ashland, that subsequent meetings of this Section be held in either Louisville, Lexington, Frankfort, Winchester, Richmond, Bowling Green, or Owensboro. Motion seconded.

Dr. F. C. Thomas called attention to the fact that approximately fifty per cent of the membership of the Section is located in Louisville and expressed the opinion that future meetings should be limited to Louisville and Lexington, which view was concurred in by Dr. A. L. Bass, Louisville. Dr. Shelton Watkins then moved, as a substitute for Dr. Williams' motion that the place of meeting be left to the discretion of the Councilors, with recommendation that future meetings be limited as far as possible to Louisville and Lexington. Substitute motion seconded and upon being put to vote was declared carried.

Dr. J. D. Williams, Ashland, submitted manuscript of a series of lectures by Dr. Hirsch of Vienna, on the pituitary body and suggested that the Secretary have copies made and distributed to such members as desire them.

Upon motion duly seconded and carried, Dr. Samuel G. Dabney was declared elected to honorary membership in the Society.

There being no further business before the Section, the scientific program was proceeded with as follows:

One Hundred Consecutive Intracapsular Cataract Extractions, by Dr. C. Dwight Townes, Louisville. Discussion by Dr. Wiley R. Buffington, New Orleans; Adolph O. Pfingst, Louisville, and in closing, the essayist.

Lens Extract Therapy in Cataract, by Dr. Charles K. Beck, Louisville. Discussion by Dr. F. C. Thomas, Lexington, and in closing, the essayist.

Successful Treatment of Dacrocystitis With Less Radical Surgery, Dr. J. D. Williams, Ashland. Discussion by A. L. Bass, Louisville; M. C. Baker, Louisville; Wiley R. Buffington, New Orleans; C. Dwight Townes, Louisville, and in closing, the essayist.

Vasomotor Rhinitis, The Rhinologist's View, by Karl N. Victor; The Allergist's View, Armand E. Cohen. Discussion by Jos. D. Heitger, Louisville; Shelton Watkins, Louisville; E. C. Yates, Lexington; S. B. Marks, Lexington, and in closing, the essayist.

#### Afternoon Session

The section reconvened at 2:00 P. M., and in accordance with resolution adopted at morning session, election of officers for the ensuing year was proceeded with, and the following were declared elected:

A. L. Bass, Louisville, President; M. C. Baker, Louisville, Vice-President; F. C. Thomas, Lexington, Secretary; Walter Dean, Louisville, Treasurer.

The scientific program was then resumed as follows:

The Medical Treatment of Glaucoma, by Dr. Frank Pirkey, Louisville. Discussion by Auryne E. Bell, Louisville; Wiley R. Buffington, New Orleans, and in closing, the essayist.

The Tonsil as a Focus of Infection, by W. O. Weldon, Glasgow. Discussion by Shelton Watkins, Louisville; E. C. Yates, Lexington; Jos. D. Heitger, Louisville, and in closing, the essayist.

A Practical Consideration of Alterations

in the Voice, by Will R. Pryor, Louisville. Discussion by Jos. D. Heitger, Louisville; E. C. Yates, Lexington; Shelton Watkins, Louisville; N. C. Baker, Louisville, and in closing, the essayist.

The President declared the Section adjourned at 4:30 P. M. to meet sine die.

F. C. Thomas, *Secretary*

## ORIGINAL ARTICLES

### PRESIDENT'S ADDRESS

### THE SYMPATHETIC NERVOUS SYSTEM AS A CAUSATIVE FACTOR IN ATYPICAL NEURALGIA, A REVIEW.*

Samuel B. Marks, M. D., F. A. C. S.

Lexington.

The careful study of any morbid condition usually dates to the formulating of at least three important factors: 1. The prevalence of the condition. 2. The establishment of one or more definite etiological factors in its production. 3. The discovery of some well defined method or methods for it's alleviation or cure.

That headache was a common symptom in ancient civilizations has been shown both by their bibliography and by the more recent archeological researches showing evidence that surgical trepanning is a very ancient procedure and in all likelihood was resorted to by these peoples for the relief of headache without knowledge of it's causative factors.

So today we find headache still a very common symptom and one often most trying alike to its possessor and to the physician to whom its relief is a responsibility.

The scope of this paper will not allow a full discussion of many phases of this class of headache but I will try to set forth and elucidate some of its causative factors gleaned largely from the researches and writings of others and to a much lesser degree from my ability to correlate these factors clinically.

Without question the largest impetus given the study and treatment of atypical neuralgia or the lower half headache, and other headaches as well, was given by Sluder when he published in 1908 the first report of his five year researches upon the spheno-palatine ganglion and its relation to the cause of headache.

A brief description of the spheno-palatine ganglion is here necessary and is taken from Schaeffer's work upon the nose and sinuses.

This ganglion has three so-called roots which convey nerve fibers to and from the ganglion; the motor (visceral), the sensory and sympathetic, all three of which roots are of a mixed character and are named from the fibers which predominate.

The motor root, in its major part, consists of visceral sympathetic motor fibers (preglionic) of the pars intermedia of the facial nerve and arise in the medulla, from a group of cells near the facial nucleus, pass through the geniculate ganglion and become the fibers of the great superficial petrosal nerve which joins the great deep petrosal nerve, formed by the sympathetic root from the superficial sympathetic ganglion, which fibers are virtually a direct extension of the carotid plexus, to form the Vidian nerve.

While most of the visceral motor fibers of the motor root are preganglionic and pass directly through the geniculate ganglion to arborize in the sphenopalatine ganglion with the cells bodies of post ganglionic neurones, a few are interrupted in the geniculate ganglion and pass uninterrupted to their distribution.

The opposite is true of the sympathetic root fibers the majority of which are axones of cells of the superficial cervical sympathetic ganglion and pass uninterrupted through the sphenopalatine ganglion to their distribution, while a few fibers are preganglionic and pass directly from cells located in the ventral horns of the upper thoracic spinal cord which cells aborize with the kindred cells in the sphenopalatine ganglion.

Further a number of somatic sensory neurones with the cell bodies in the geniculate ganglion are part of the motor root and Schaeffer believes that there are sympathetic afferent neurones associated with this root which have cell bodies in the geniculate ganglion. He also states in addition to the motor elements from the thoracic cord that the great deep petrosal apparently contains afferent sympathetic fibres with the cell bodies located in the gangha of the dorsal roots of the cord.

These two roots unite to form the Vidian nerve which carries their fibers to the sphenopalatine ganglion through the short pterygoid canal of Vidian lying upon the sphenoid floor as an elevated ridge and being separated from the sphenoid cavity by a wall varying in thickness from dense bone to very thin bone, with not infrequently dehiscences leaving only the mucous membrane to protect the nerve.

The sensory root is composed of 2 or 3 short trunks, the sphenopalatine nerves, connecting the maxillary nerve with the upper border of the ganglion most of which come from the Gasserian ganglion. A few of these fibers end in the sphenopalatine ganglion to supply its capsule but most of them pass through or around the ganglion to be distributed, without interruption, through its branches.

*Read before the Eye, Ear, Nose and Throat Section of the Kentucky State Medical Association, Louisville, May 17-18, 1934.

Sluder describes the typical syndrome of lower half headache as follows: Beginning as a coryza, many times so slight as to be forgotten, to be followed in a short time by pain at the root of the nose, in and about the eye, the upper jaw and teeth, sometimes the lower jaw and teeth and extended backward to the temple and about the zygoma to the ear, causing ear ache emphasized at the mastoid, but always severest at a point 5 cm. farther back, which point is always sensitive to pressure, thence backward by way of the occiput and neck. It may extend to the shoulder blade and the shoulder, less often to the axilla and breast and in severe attacks to the arm, forearm, hand and even finger tips. This is the usual picture, but at times there is a sense of stiffness or aching of the throat or pain in or oftener itching of the soft palate or pain inside the nasal fossa or feeling of the teeth being too long or rarely a perverse taste or scotoma scintillans or salivation. Many other manifestations have been reported by Sluder and others which are of no concern to this review.

Sluder described Vidian neuralgia as a more or less constant pain, but mixed with a perfectly defined tic which comes as a stabbing pain to the lower half of the head posteriorly, neck and shoulder and treated this condition by proximal cocainization of the Vidian nerve upon the sphenoid floor, before or after operation. and by ganglion injection with phenol and alcohol.

He further demonstrated, since the pain distributions of lower half headache many times occur independently of each other. that cocainization of the outer or maxillary side of the sphenopalatine ganglion would stop the anterior pain and that cocainization of the Vidian or inner side would stop the posterior pain, including the ear ache and pain in the eye and photophobia.

Sluder contended that the sympathetic connections of the sphenopalatine ganglion entered very largely into the causation of the pain and agreed with Ranson, Head and Penfield and others in their work upon the cause of pain in angina pectoris that the efferent impulses must be carried through sympathetic anastomoses with afferent fibers of spinal or cranial nerves.

Vail in recent publications thinks all the symptoms of lower half headache as described by Sluder can be caused by neuralgia of the Vidian nerve which is always due to an active or latent infection of the sphenoid sinus causing an inflammation or irritation of the nerve as it lies in its canal upon the sphenoid floor.

He explains the distribution of pain in Vidian neuralgia as follows: the great superficial petrosal nerve from the geniculate ganglion of the facial nerve unites with the great deep petrosal nerve which is formed by the union of a branch from the carotid plexus and the small deep petrosal nerve from the petrous ganglion of the glossopharyngeal nerve to form the Vidian nerve, so there is a very close association of the sphenopalatine ganglion, the geniculate ganglion, the superior cervical sympathetic ganglion, the carotid plexus, the glosso-pharyngeal nerve and the vagus through its sympathetic branches from the carotid plexus Branches of distribution from the sphenopalatine ganglion to the eyes, nose and throat and mouth easily explain the pain in these sites. Fenton and Larsell feel that the ear pain is through the great superficial petrosal nerve to the geniculate ganglion and through the cutaneous branch of the facial (nerve of Rhinehart), the existence of which nerve is questionable, or through the small superficial petrosal nerve, formed by the union of the tympanic nerve from the petrous ganglion of the glossopharyngeal and a branch from the geniculate ganglion and ending in the otic ganglion, or through the auricular branch from the ganglion nodosum of the vagus which is united with the superficial cervical ganglion and the petrous ganglion of the glossopharyngeal. The pain in the neck, back and arm is explained by impulses passing backward through the great deep petrosal nerve to the superior cervical ganglion of the sympathetic and thence to the cervical nerves.

He reported 31 cases upon 9 of whom he did sphenoid operations with relief in 8 and no relief in 1 who did not stay under his care. The other 22 cases were relieved by cocainizing the sphenopalatine ganglion or local treatment of the sphenoid sinus.

Vail feels that the only true cases of sphenopalatine ganglion neuralgia are those due to growths of the ganglion or adjacent to it, abscesses or hemorrhages in the spheno-maxillary fossa or trauma to the ganglion, such as injections of alcohol into its substance.

In a later article Vail concludes that the various sites of pain in atypical neuralgia can be explained by very definite relation and distribution of certain nerves and ganglia to each of these sites and describes Vidian, geniculate ganglion, tympanic plexus, glossopharyngeal, and great superficial petrosal neuralgia as probable definite entities and also as capable of many cross associations.

Penfield, in an address presented before the American Academy at its 1932 meeting, states that in 1925 after studying his operative cases he offered the following explanation of the arm and shoulder pain in angina pectoris; That the pain was not produced by afferent sympathetic fibers to the spinal cord, but that the impulse passes up a sympathetic

axone to be discharged outward along collateral branches producing a condition in the skin, which gives rise to painful impulses in the ordinary cerebrospinal nerves to the part and that this afferent impulse up such spinal nerves gives the referred pain.

From this premise he began to approach migraine and head pain feeling that some analogy might exist since the intracranial vessels are all supplied by nerves from three sources: 1. The carotid sympathetic plexus. 2. The sympathetic nerves along the vertebral artery from the stellate ganglion of the sympathetic. 3. A small nerve described by his associate Charobski, which accompanies the facial and leaves it to join the middle cerebral artery by way of the great superficial petrosal nerve. This nerve he believes to be the vasodilator or parasympathetic supply to the brain, thus giving the vessels of the meninges a double control similar to the other vessels of the body and that he has been able to demonstrate this power of dilatation of these vessels by stimulating this automonic tract that passes by means of the facial and great superficial petrosal nerves.

Arguing from these findings and from the fact that the middle meningeal vessel when pressed upon refers pain to the temporal region and as the additional supply to the dura is from the first and second division of the trifacial nerve and since many evidences of vasomotor disturbances occur in migraine, particularly unilateral migraine, accompanied by many nervous system disturbances as hemicrania, ophthalmoplegia, numbness, parasthesias and paralyses, which often persist for days or weeks, he feels that regardless of underlying conditions, as food idiosyncrasies, fatigue, etc., that there is a constant underlying neurological mechanism which, in his opinion, involves an axone reflex in the sympathetic system and afferent somatic nerves.

He reports two cases operated upon for the relief of a migrainous type of headache. The first case with right frontal pain radiating to the neck and shoulder, preceded by pallor and fullness of the nose and lachrymation of the right eye. These attacks occurred every twelve days and were so severe that morphine only made them tolerable. This patient was entirely free of attacks during two pregnancies and had formerly been subjected to an injection of the sphenopalatine ganglion without relief.

The first operation consisted of stripping the carotid artery of its nerve sheath, removal of the superior sympathetic ganglion and the upper pole of the stellate ganglion and removing the nerve plexus from the vertebral artery. This procedure gave relief of the neck and shoulder pain except that due to the sympathetic surgery, but there was no relief of the headache and pain in the side of the face.

Three months following the first operation the Gasserian ganglion was injected with novocaine by way of the third division of the trigeminal nerve with relief of the head pain only after the anesthesia had extended to the first division. Thus assuring himself of the first division as the pain distributor he resected the upper part only of sensory root of the Gasserian ganglion, since which time there has been no return of the headache.

Temple Fay has made extensive studies of vascular pain and in cases of atypical neuralgia has demonstrated that pressure of the carotid artery against the transverse process of an adjacent vertebra will cause pain at the region of the atypical neuralgia, this he terms carotidynia, and that Faradic stimulation of the sheaths of the carotid vessels and the internal and external jugular veins, when operating under local anesthesia, will cause the same pain.

Many neurosurgeons have found, while using local anesthesia, an absence of pain in both the dura and the cortex upon Faradic stimulation but have found extreme pain upon stimulating or compressing the large branches of the middle meningeal artery.

Craig, of the Mayo Clinic, has recently reported a case explored for a cause of a severe lateral headache in which he found the middle meningeal artery confined for a short distance in a bony canal instead of a groove, which was immediately relieved by severance and ligation of the artery above and below this canal.

Fay has also demonstrated tenderness to pressure and pain upon stimulation of the vascular sheaths of the facial, temporal, occipital and carotid arteries in patients who still had frequent dull aching pain referred to the field of distribution of the large vascular branches upon whom section of the sensory root of the fifth nerve, the glossopharyngeal nerve and the upper cervical roots had been done. By various operations for the relief of pain in cancer of the mouth and throat and in intractable atypical neuralgia he has ruled these nerves out as a complete factor and has only obtained relief in such cases by denudation of the common carotid artery, especially at its bifurcation together with severance of the branches from the carotid plexus to the vagus and also the jugular branch to the superior cervical ganglion.

Such vascular pain he decides must enter the central nervous system by one of three routes viz: 1. The vagus nerve. 2. The sympathetic chain. 3. The carotid sheath to

he base of the neck and thence into the cervical thoracic posterior roots.

He reports a case upon whom seven operations were done in three years for relief of an intractable atypical neuralgia with insomnia and in addition a traumatic neuralgia of the trigeminal due to injection. This patient had had many sinus operations and much dental surgery with no relief. The operations are listed as follows: 1. Section of the sensory root of the trigeminal ganglion but no relief of the atypical neuralgia. 2. Resection of the sphenopalatine ganglion and the upper branches of the facial, with no relief. 3. Ablation of the cervical sympathetic from below the superior cervical ganglion, with no relief. 4. Stripping of the common carotid artery with 40 per cent relief of pain. 5. Section of the hypoglossal nerve with relief of deep referred pain to the angle of jaw and deep in ear. 6. Extracranial section of the glossopharyngeal nerve and of the sensory branches of the vagus and Arnold's nerve with complete relief in the malar region. 7. Division of the vagus sheath and the vagus fibers to the internal and external carotid arteries and denudation of the carotid bifurcation with marked relief of the atypical neuralgia. Carotidynia seems definitely of vascular origin since it was only relieved by the last operation.

Fay concludes that his various operations and studies have lead to the distinct impression that the pain fibers of the head and neck find cranial entry through the vagus, for the most part near the carotid bifurcation.

By special studies of gradnated anesthesia of the spinal cord during attacks of atypical neuralgia he decides that a large portion of these fibers from the deep vascular region of the face enter into the upper thoracic and lower cervical cord, and lists the factors of the cause of pain in atypical neuralgia as follows: Infection and inflammation in the neck from mastoid or even middle ear disease, sinus or throat infection if it should pass down the carotid sheath producing adhesions or enlarged glands or pressure about the vagus and superior cervical ganglion or carotid sheath.

He reports four reflex visceral cases of atypical neuralgia upon the right side relieved by removal of the gall bladder, and mentions cases of neuralgia with apical lesions in the lung showing extensive pathology at the base of the neck.

Fay says all such cases should have x-ray studies of the teeth, mastoid, sinuses and chest and a very careful history should be taken. His conclusions of the eight years of study are: 1. Superficial pain is by way of the trigeminal and cervical branches. 2. Deep pain sense is transmitted through the sensory branches and connections of the vagus nerve. 3. Tenderness and deep pain along arterial trees through the carotid sheath to the cervical thoracic cord. By stimulation of various vessels exposed at operation under local anesthesia he has compiled a very interesting resume of his results. Stimulation of 1. The middle meningeal causes deep pain in the eye and temporal region. 2. The middle cerebral: deep pain in the eye and headache. 3. The superficial temporal: pain in the ear and scalp of temporal region. 4. The internal maxillary: pain in the eye and the malar region. 5. The occipital: pain in the scalp of this region and in the back of the neck. 6. The external maxillary; inner canthus of eye and cheek. 7. The lingual: the tongue and the tonsillar region. 8. The external carotid: the scalp, malar region, gums, teeth and jaws. 9. The internal carotid; deep in eye, deep in ear and headache. 10. The carotid bifurcation; scalp, ear, nose, teeth, gums, cheek, jaws and tongue.

Few such persistent atypical neuralgias have occurred in our practice, but there has been one of glossopharyngeal neuralgia, relieved by operation at the Mayo Clinic, and one after considerable nasal surgery by myself and in an adjacent city without relief, relieved after her gall bladder had, at my insistence been removed, although the usual relief for a few weeks was occasioned by the different nasal procedures. The cases of atypical neuralgia seen by us have been relieved or have been helped by various local treatments of the sphenoethmoid region and cocainization of the sphenopalatine ganglion and Vidian nerve, occasionally combined with septal resection or posterior ethmoid and sphenoid surgery so that it has not been necessary to refer them to the neurosurgeon with very few exceptions, which for most part have been cases with intracranial lesions.

The thought arises whether the occasional headache which is relieved by removal of the tonsils is made better by the removal of the focus or by the elimination of the tonsil as a chronically inflamed organ with a nerve supply from this very highly organized group of sensory and sympathetic nerves.

A very definite explanation is found for the ear and head pains which occur in the throat, ear or sinus conditions which has caused involvement, even to a very slight degree, of the deep cervical lymph nodes about the carotid arteries.

The speaker has been very much interested in the articles reviewed and also those of Harkness and Kuntz, just published, and hopes that the presentation of this review has been of like interest to all here present and finally cannot help but feel that some day in the not too distant future the further study of the intricacies of the cervical and cephalic sympathetic connections may reveal

certain facts which will lead to a more comprehensive understanding in the study and treatment of that most fascinating and so often embarrassing condition, known as allergy.

## LENS EXTRACT THERAPY IN CATARACT*

C. K. Beck

Louisville.

Cataracts are peculiar. They defy all laws, are impossible of exact classification and for the most part their etiology is elusive. Prognosis is so uncertain as to be next to valueless. Occasionally they progress steadily and rapidly to complete blindness except to lights. At other times for no provable reason they progress for a time and then become stationary for months or years. They may then progress to blindness or may remain stationary or in very rare instances disappear without known reason.

However this general rule may be laid down. Unless a known cause be discovered and removed they tend more or less slowly and irregularly toward blindness. When blindness comes the only remedy of which I know is removal of the cataractous lens and this means at least complete loss of accommodation.

Classification is not important for the purpose of this paper except in so far as certain kinds have been found not to yield to treatment. Davis claims nuclear and fully developed cataracts do not yield. So far as the nuclear are concerned I do not entirely agree with him.

This paper has nothing to add to what has been often written and said as to etiology However your attention is called to one rather striking fact which has been mentioned by several observers. Astigmatism against the rule occurs more frequently in cataract than in those without cataract. In sixty-one cataractous eyes, nine had no astigmatism, sixteen astigmatism with the rule and thirty-six astigmatism against the rule. For comparison, consecutive records of sixty-one eyes were taken. Of these thirteen had no astigmatism. Thirty-one were with the rule with seventeen against. In terms of percentage, in cataract about fifteen per cent had no astigmatism, twenty-six per cent with the rule and fifth-nine per cent against. Where there was no cataract twenty-one per cent, with the rule and twenty-eight per cent against.

| | No. Astigmatism | With rule | Against rule |
|---|---|---|---|
| 61 cataractous eyes | 9 or 15% | 16 or 26% | 36 or 59% |
| 61 non-cataractous eyes | 13 or 21% | 31 or 51% | 17 or 28% |

Of course this is too small a number to be more than suggestive. However if any conclusion is to be drawn from the above figures it is that continual wearing of correction for astigmatism may be preventive of cataract.

Therapeutically lens extract has been used with one or two purposes in mind. First to produce clearing of the opacities of the lens and second, in preparation of patient for cataract extraction and in combating post-operative inflammation. The second will be discussed first. Much work has been done by various workers and clinicians in the use of lens extract for this purpose. The reports are mostly favorable. Here are two case reports when used for this purpose.

Case Report: Mr. O., age 70, bilateral cataracts, had perception of hand movements only with each eye. There was exclusion of the right pupil from an old iritis. Patient gave negative results from intradermal injection of lens extract. On this one, treatment began July 6th, 1932. Knowing little about the extract, knowledge for the selection of cases was in proportion. Later, experience showed that this case was hopeless from the standpoint of clearing. After two months of almost daily injection the truth finally dawned and the left eye was operated. For several days the pupil was very clear and there was almost entire absence of operative reaction. And then one morning there appared a chunk of lens cortex large enough to completely fill the pupil, doing just that thing exactly. Irrigation had been done after operation and the eye appeared entirely cleared of all cortex. In three days the chunk was entirely gone. It just melted down. With correction the patient got 20-20 vision and could read the smallest type. He had the least reaction I ever saw following cataract operation. But he was a complete failure from the standpoint of clearing his cataractous lenses with lens antigen. If my other patient of the same day, whose history will be detailed later, had behaved the same way I would have done as have many other clinicians, concluded that there is nothing in lens extract from the standpoint of clearing cataractous lenses.

By the time the second patient came in experience had taught that completely opaque lenses cannot be cleared with lens antigen. So operation was advised. Finding the patient positive to lens antigen he was given six injections to desensitize him. Before finishing it was regretted that several times

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six were not given. He had light preception only with the right eye though the pupil was snappy and projection good. Perception of hand movements only with left eye. The usual one-stage operation was done on the right eye removing a Morgagnian cataract. Immediately on completion of the iridectomy the lens presented itself and no capsulotomy was done. The capsule was filled with fluid that was almost clear and the nucleus, about one-half the diameter of the lens, moved freely from side to side. There was no loss of vitreous. For four days the eye looked good. There was only a moderate amount of reaction. Then a small amount of blood appeared in the anterior chamber and he complained of not being able to see as he had done at previous dressings. Two days later the eye was full of blood, the fundus reflex was absent and the globe was very much injected. Under treatment this all subsided. He lived in the country and he was allowed to go home. He was to return for refraction but failed to do so. Nothing further has been heard from him.

In nineteen cases where lens extract has been used for the purpose of clearing the opacities, two had one aphakic eye each and three had unilateral cataracts, fourteen had bilateral cataracts. There were thirty-three cataractous eyes. Of these there were three that could perceive light or movement only. As explained above these three eyes are not amenable to this treatment. That leaves thirty eyes in which one could hope for some favorable result. Favorable result as I regard it is improvement in vision either with or without correction or both. Twenty-two eyes have shown this favorable result, six eyes are just as before. Two progressed in spite of treatment.

But there is one case in particular, to which your attention should be called. On July 6th, 1932, treatment was begun of my first two patients with lens extract. One, Mr. O, whose history was detailed above, came to operation. The other one Mrs. G, gave the best results As good results in all cases treated would leave little to be desired. She has a rather poor result from operation of the left eye for cataract. Her vision with right eye was 20-200. No record was made of her corrected vision at that time or of her uncorrected vision after the treatment terminated. So figures cannot be given on that. This omission was an oversight. However drawings were made on her record card of the ophthalmoscopic appearance of the lens before and after treatment. Part of the opacity was nuclear. It cleared entirely. A letter from her eighteen months after dismissal stated she could still see to read the finest print and thread a fine needle. However she said she thought she could not see so well as on dismissal. With correction she could see 20-30.

I am of the opinion that dosage and time intervals mean much in the use of lens extract for the purpose of clearing cataractous lenses. My plan is to give 4-100 c. c. intradermally as first dose. In twenty-four hours if patient is anaphylactic there will be a wheel and erythyma. Whether negative or positive they are then given 1-10 c. c. subdermal. The dose is doubled each day until 1 c. c. is given. Then the dose is increased 1-4 c. c. each day till 2 or 3 c. c. dosage is reached. After four or five doses lenses are examined daily. If areas previously clear become milky, treatment is interrupted until the milkiness has subsided.

This phenomenon is noticed in nearly all cases after a few doses have been given I have never seen it in non-cataractous lenses. As to what it means, my theory is, that the opaque material is being dissolved by the lymph. However that may be, in a few days this clears and then treatment is resumed where left off. The dosage has been increased up to 10 c. c. but no better result has been had than from the smaller dosage. I am a little doubtful if the results were as good. Of late I have never gone over 2 c. c. at a dose.

I do not use the extract alone. Along with it I use instillations of dionin and increasing dosage to toleration of Iodides. Attention to general health is necessary. Any astigmatism should be corrected as well as any other correctable visual defect. The refraction should be checked frequently and where there is much difference, a change of lenses should be made.

I have not discovered a tendency toward change in refraction produced by lens extract. We know that one of the early signs of cataracts is the requirement of less plus in the correcting lens. It has occurred to me that the lens antigen might cause some absorption of the lens material itself requiring more plus. This has not been the case often enough to mean anything more than the usual changes in refraction. Out of twenty-seven eyes checked, in ten there were no changes in the lenses worn when starting; more plus was added in five, less plus was necessary in five, more minus in four and less minus in three.

Conclusion: Lens extract for the purpose of clearing incipient cataracts is valuable. Out of thirty eyes twenty-two showed some improvement.

Lens extract preparatory to cataract operation should become routine.

Well developed cataracts are not cleared by antigen treatment.

One of my patients said "Two eyes are better than one, if one is a beef's eye."

## DISCUSSION

**F. C. Thomas,** Lexington: Some years ago I saw two cases which were sent to me by Dr. Bell of Cincinnati. They were residents of Lexington and both had posterior pole cataracts. Dr. Bell did not consider them to be fit subjects for operation and prescribed lens extract treatment and sent them to me to carry it out. That was about eight years ago. I gave them the treatment about as Dr. Beck has outlined. One of these patients passed completely out of my observation about eighteen months after the treatment was started and I have heard nothing further from her. The other still lives in Lexington and comes in now and then for treatment. She had two courses of treatment lasting about nine months each, which is apparently considerably longer than Dr. Beck advocates. Despite treatment, the cataract in this patient is about the same as when I first saw the case.

There is no question that this treatment has considerable value in polar or capsular cataracts, but does no good in nuclear cataracts.

**C. K. Beck,** (in closing): I am satisfied there is something in this form of treatment. I do not see how the first case mentioned could have cleared up as it did unless there is something in it. I feel that we do not know enough about its administration to obtain the same results constantly in all cases. I went over the records carefully to see if there is anything in the way it was given in this particular case to account for the results obtained. The only thing I could discover was this unexplained milkiness of the lens, and I would give much to know what significance it has, if any.

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**Brucella Infection and Immunity in Man.**—The method of Huddleson and his associates for determining the opsonocytophagic power of blood for Alcaligens is a modification of the Leishman and Veitch technic. The authors' studies show that the in vitro activity of the polymorphonuclear cells in whole citrate blood for Alcaligenes is an expression of immunity to Alcaligenes and an indication of the progress toward recovery in active infection. The absence of or a low phagocytic activity obtained in conjunction with a negative allergic skin test is evidence of susceptibility to Alcaligenes infection. Infection in an individual is indicated by a positive allergic skin test obtained with Alcaligenes nucleoprotein in conjunction with a negative or a low opsonocytophagic activity of the whole citrated blood for Alcaligenes.

# ONE HUNDRED INTRACAPSULAR CATARACT EXTRACTIONS BY THE KNAPP METHOD*

C. Dwight Townes

Louisville.

Inasmuch as the advantages of intracapsular extraction of cataract, i. e., the clear, black pupil; the rapid healing with comparative freedom from ciliary congestion and iritis, and the avoidance of secondary cataract, are so much to be desired, it is my conviction that every patient upon whom such procedure is practicable, is entitled to those advantages. The cases are selected according to the type of cataract, the absence of certain complications and the disposition of the patient.

The method of operation which is safest and most satisfactory is that advocated by Dr. Arnold Knapp, which he calls the conservative method of intracapsular extraction, i. e., preliminary subluxation of the lens with a suitable capsule forceps.

A disadvantage is that subluxation does not take place in every instance because of rupture of the capsule. In such event the primary purpose is not achieved, but the operation then is continued as in the ordinary procedure with the additional assurance that with a large portion of the anterior capsule torn away, delivery will be facilitated and there will be less chance for remaining cortical material to be caught between the anterior and posterior capsules. A further disadvantage is the complications which are liable to occur, for which, as Knapp says, the operator must be prepared.

The cases in this series have been operated upon during the past five years, during which time operation was performed upon 172 eyes, so that the lens was extracted in capsule in 58.1 per cent of the cases attempted. In the 100 cases there were 63 mature, 17 hypermature and 20 immature cataracts. 86 were uncomplicated, 14 complicated.

Preparation of patient and technic: As Dr. Walter B. Lancaster says, the cataract patient should be so prepared that (1) he does not want to move, and (2) he cannot move if he should want to. The first condition is brought about by preliminary sedatives: Bromides, some of the barbituric acid group of drugs, or by morphine and scopolamine; and by thorough anesthetization. The second condition is brought about by careful fixation of the eye.

A Guist-Black Speculum is used. This lifts the lids away from the eye so that the patient cannot squeeze and exert pressure

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upon the eyeball. A bridle suture is placed through the tendon of the superior rectus muscle and tied through the loops on the speculum. Without the bridle suture the Guist-Black speculum is not desirable because it is a rather heavy instrument and when adjusted to lift the lids leaves the eyes so deep set that it would be quite difficult to manipulate the knife in making a section. However, when the suture through the superior rectus tendon is tied, the cornea is turned downward and, when the section is made the operator cuts somewhat upward and forward between the blades of the speculum. A conjunctival flap is prepared and a suture inserted and loops laid to the sides so that they will not interfere with the incision. A limbal incision comprising practically half the circumference of the cornea is made. An iridectomy is performed and the pillars carefully replaced. (A preliminary iridectomy has this advantage, that at the time of extraction there will be no blood in the anterior chamber. If the incision for the preliminary iridectomy is made entirely in the cornea it will not interfere in any way with the conjunctival flap). If there is bleeding into the anterior chamber, the blood must be removed by irrigation. Then the Kalt capsule forceps is used to grasp a large knuckle of capsule at the pupillary margin in the lower third of the anterior capsule. Traction is made, a sort of rocking motion, slowly and deliberately, from side to side and upward. As soon as the suspensory ligament is broken, the lower border of the lens appears in the pupillary space. The capsule forceps are released. With an expression hook pressure is made straight back at the lower limbus, with counter pressure by a spoon over the scleral lip of the incision above and the cataract made to "tumble" and be delivered lower border first. As the lens tumbles the expression hook is made to follow it upward, folding the cornea underneath. The final step in delivery is to break the upper suspensory ligament and carry the lens to one side with the expression hook. The conjunctival suture is tied immediately, before replacing the iris pillars. The bridle suture is cut and the speculum removed. Atropine is instilled, bichloride ointment applied and the dressings put in place. The dressings are not changed for 72 hours. If the conjunctival suture has not sloughed out by the seventh day it is removed then.

Results—uncomplicated cases:

In the 86 uncomplicated cases the visual results were as follows:

20-15—10; 20-20—45; 20-30—12; 20-40—14; 20-50—1; 20-70—2; 20-100—1; 20-200—1; 81 or 94.44 per cent obtained vision of 20-40 or better.

Among this group the following post operative complications occurred:

Loss of Vitreous occurred in 7 cases with the following details:

In cases 26 and 65, there was loss of a large amount of vitreous immediately after delivery of the lens. There was incarceration of the iris in the angle of the incision resulting in slightly updrawn pupil, and there were numerous small vitreous opacities. Final visual result was 20-70 in each instance. In cases 38, 91 and 95, there was slight vitreous loss following delivery of the lens. Visual result was 20-15, 20-20 and 20-30 respectively. In case 82, there was a slight loss of vitreous following delivery of the lens with a small prolapse of the iris on the nasal side, and one month after the operation a small bleb quite similar to that following sclero-corneal trephine appeared over the prolapsed iris. This has not been interfered with because intraocular tension has remained normal. The patient has suffered no discomfort and it probably serves the same purpose as the filtering bleb in the trepine operation. Visual result was 20-30. In case 81, there was a slight loss of vitreous following delivery of the lens and incarceration of the iris in the temporal angle, with final result of 20-40.

Iritis or Iridocyclitis developed in 7 cases.

The slightest amount of redness which persisted longer than the usual time was counted. In case 31, after a satisfactory operation with immediate result of 20-20, patient developed iridocyclitis two months later, with the presence of numerous vitreous opacities. After persisting for four weeks the vision was 20-50. The patient has not been seen for two years. Cases 46, 66, 73, 76 and 89, all showed a slight amount of ciliary congestion which lasted longer than usual, but which was not of serious consequence. Four of these obtained 20-20 and one 20-15. Case 74 suffered bladder symptoms after a satisfactory cataract extraction and it was discovered she had a malignant tumor of the bladder. This was fulgurated and following this operation the patient suffered a severe attack of iritis Final visual result was 20-40.

Hyphema developed in 3 cases:

In case 34, the first night following the operation the patient struck his eye. The next day the anterior chamber was filled with blood which absorbed slowly. There was also a hemorrhage into the vitreous which resulted in numerous opacities. Final result 20-200. In cases 89 and 92 there was hyphema which cleared up rapidly.

Glaucoma was noted in two cases:

In case 29, the extraction was satisfactory and immediate visual result was 20-20. A year later the patient returned with glaucoma. A cyclodialysis was done which re-

lieved the increased tension. Visual result was 20-100. In case 77, two months after the operation the patient developed an increased tension which subsided readily after the use of myotics and has not recurred. Final result 20-20.

Detachment of retina was seen in one case.

In case 53, after a satisfactory operation and hospital convalescence, upon the patient's first visit to the office a large bulbous detachment of the retina was noticed. However, this detachment had subsided several days later upon his next visit and has never recurred. Final result 20-30.

Striate keratitis:

In cases 2, 8, 51, 56 and 61, this condition had cleared up completely by the time the patients were discharged from the hospital.

The complicated cases are as follows:

In case 11, there was chronic iridocyclitis with sub-normal tension, hypermature cataract and faulty projection. This was a familial type of cataract, one brother and two sisters having developed cataracts before forty years of age. He had previously undergone operation elsewhere for removal of the cataract. The operation had been stopped after the section was made. Upon completion of the section, fluid vitreous escaped and the eyeball collapsed. By exerting pressure at the limbus below with the expression hook, it was possible to grasp the lens and it was delivered without further loss of vitreous. After a rather delayed convalescence the final result was 10-200. In case 18, there was old trachoma with entropion, distichiasis and corneal maculae. There was a loss of considerable amount of vitreous immediately following delivery of the lens when the patient became unruly and jerked his head. There was incarceration of the iris and vitreous opacities. Final result was 10-200. In case 21, there was old trachoma with corneal maculae. Final result was 20-70. In case 23, there was high myopia and faulty projection on nasal side only due possibly to detached retina. Hyphema after the operation and large detachment on the nasal side was found. Final result 2-200. In case 24, there was a slight loss of vitreous immediately following delivery of the lens. There was central chorioretinitis. Final result was 20-50. In case 30, there was chronic simple glaucoma upon which sclero corneal trephine had been done. Final result 20-200. In cases 35, 42, 64 and 75, there was central chorioretinitis with resulting vision of 20-200, 20-50, 20-200 and 20-200 respectively. Case 36 had been seen seven years previously and advised to have cataract extraction. The lens was hypermature. There was very poor projection and sub-normal tension. The patient had suffered several attacks of iridocyclitis. Final result was total blindness. Case 37 was the other eye of the same patient. The operation was satisfactory but there was a large area of central chorioretinitis. The final result was 10-200. Case 54 had chronic simple glaucoma. Final result 20-50. In case 80, there was chronic simple glaucoma in which a wide peripheral iridectomy had been made three months previously. The extraction was satisfactory and on the third day when first dressing was made the eye was in good condition and vision satisfactory. Twenty-four hours later, i. e., on the fourth post operative day, while lying quietly in bed he suffered sudden and excruciating pain in the eye. There was an expulsive hemorrhage which ruptured the wound. After a stormy convalescence the reaction subsided, but vision was completely lost.

The experience with this series of cases has given me sufficient encouragement to continue with this method of intracapsular extraction, and with further experience it is my hope to be able to report even better results. As above stated the operation is not suitable for all cases, but it may be tried in any uncomplicated case and is of particular value in immature cataracts which have developed simultaneously in both eyes to the point where the patient does not have useful vision. As long as one eye retains useful vision it is still thought best to allow the cataract to mature, and many of these are operated upon with capsulectomy. Another great advantage from the viewpoint of the patient is an economical one in that one trip to the hospital is sufficient, thus avoiding two or more operations which is frequently the case with the classical method of cataract extraction.

## DISCUSSION

**Adolph O. Pfingst,** Louisville: Dr. Townes has presented a timely subject. I say timely because I think that more of us should be prepared to do extractions in capsule and this presentation may furnish the stimulus to bring this about. We have worked out a system in our private work which seems quite satisfactory in that all of the cases in which intracapsular operation is indicated are operated by Dr. Townes, who is thus enabled to develop and maintain a satisfactory technic. Although I do not believe that this method of operation should be employed as a routine, I am sure that there is a place for it in those cases where the lenses are maturing slowly and about equally in two eyes, and in consequence of which the patient would have to go through a very trying period awaiting maturity. By choice we allow one or the other lens to become mature before operating, provided the patient can continue his occupation and earn a livelihood, which means that we are doing the extra capsular method in most of our cases. In the

presence of posterior synechial and eyes otherwise complicated we always employ the extra capsular method.

I can see in the intracapsular extraction several decided advantages, among them the ability to operate before the lens becomes fully opaque. This means much to the patient from an economic and social standpoint. The relative infrequency of post operative iritis with the formation of posterior synechia is an advantage of extraction in capsule that cannot be denied. The elimination of the need for a secondary operation (discission) is also an advantage that we can all appreciate. While I appreciate fully these advantages of the intracapsular extraction, I also see in the operation some very apparent disadvantages. Of these I consider the one most worthy of mention the necessity of a much larger corneal section, which necessarily increases the danger of the loss of vitreous aside from the greater danger of this complication due to the removal of the posterior lens capsule and rupture of the suspensary ligament. Undoubtedly the danger of a secondary prolapse of iris or its incarceration with resulting widening of the coloboma is much greater in this operation than after extraction by the old operation. The relatively much greater time consumed in the intracapsular method might be mentioned as a minor disadvantage.

In the intracapsular operations that I witnessed in the early development of the operation in this country, the operators all stressed the importance of an assistant especially trained in retracting the lids with elevators. With the lids elevated by means of the Guist-Black speculum and the employment of the superior rectus suture to fix the eye and rotate it downward the operator has a feeling of safety. However, the danger of vitreous loss is not entirely eliminated. While we do not employ a conjunctival suture in the extra capsular extraction I can readily see why an operator would feel infinitely safer with the large section of the intracapsular operation to have the cornea held down with a conjunctival flap.

Although the blocking of the nerve in the temple would perhaps offer still greater safety from sneezing on the part of the patient, the injection just adds another step to the preliminaries and hence would tend to add to the nervousness of the patient. I believe it was this that prompted Dr. Townes to discontinue this measure. As a preliminary sedative we much prefer the sodium amytol as it does away with the danger of post operative nausea and vomiting which sometimes ensues after the use of morphine or scopalomine.

**Wiley R. Buffington,** New Orleans: With the improved method of intracapsular extraction of cataract described by Dr. Townes, there is no doubt that more lens will be extracted in the capsule in the future than has been done in the past. However, the operation is decidedly more dangerous in the hands of the unskilful or the man who is not doing cataract extractions constantly. To such men the capsillotomy method offers a far safer course of procedure. That is one objection to the intracapsular method.

Another one is this: Last week in my clinic I did three intracapsular operations. Two of them came out beautifully in the capsule and in the third case the capsule ruptured. So it does not always work one hundred per cent, and we must realize, therefore, that half, or nearly half, of our cases are going to be extracapsular operations.

In intracapsular operation I do a complete iridectomy at least a month or six weeks prior to the extraction, not because it cannot be done at the time of the extraction, but because my experience in a large clinical and private practice has taught me that in these old people, and people in middle life, by doing a complete sclero-iridectomy, just as we do in glaucoma, the danger of post-operative glaucoma is materially lessened. Simple extraction is a beautiful operation, but generally I have had to do some further operative work on these patients for glaucoma later. Not so when an iridectomy is done first, if you make it a complete one.

As to loss of vitreous, Dr. Townes said the loss of vitreous occurred in seven cases, no one ever gets any better results than that. In the hands of a skilful operator with the patient properly prepared, the loss of vitreous in an intracapsular operation hardly ever exceeds one per cent.

Another point is detachment of the retina. If you will examine your patients early in cases of glaucoma and cataract extraction, you will find so-called detachment of the retina. It is really not a detachment of the retina per se; it is a detachment of the choroid which forces the retina forward.

The case Dr. Townes mentioned of post-operative hemorrhage occurring four days afterwards is encouraging, in that it happens to others as it happened to me, in an uncomplicated cataract extraction with hemorrhage on the fifth post-operative day.

**C. D. Townes,** (in closing): I agree with Dr. Buffington in regard to iridectomy as a preliminary to cataract extraction by this method. In fact, I have never had the nerve to do it without iridectomy, because I have never been able to secure a dilatation of the pupil which seemed to me large enough for the lens to come through. It takes a considerably larger incision to extract the lens in its capsule than when it is delivered by capsulotomy. I have seen it done without iridectomy and the assistant had to tease the iris past the equator of the lens. I do not think that is good surgery; it involves too much trauma and the possibility of prolapse of the iris is much greater.

We had only one real prolapse of the iris in this series of cases. There were several with incarceration of the iris but so far this has led to no serious consequences.

I believe that iridectomy should be done, and preferably a preliminary iridectomy, but many patients seriously object to the double hospitalization.

## VASOMOTOR RHINITIS, THE RHINOLOGIST'S VIEWPOINT*

KARL N. VICTOR

Louisville.

The complaint called Hay Fever and its allied conditions has been the subject of wide spread investigation both in respect to the etiology and treatment and much still remains to be done to explain the various manifestations of this condition.

Hay fever is a misnomer, as neither hay nor fever are conspicuous factors. Vasomotor rhinitis, allergic rhinitis or toxic anaphylactic rhinitis are much more comprehensive terms.

In regard to a definition we may say that vasomotor rhinitis is the anaphylactic reaction exhibited by the conjunctival, nasal and tracheo-broncheal mucous membrane in persons sensitized to a given proteid.

The chief constitutional cause of vasomotor rhinitis is sensitization of the nasal mucosa. The sensitization is difficult to define but seems to be an unstable condition of the nerve ends, the sensitization being complicated by certain toxic products being liberated into the circulation.

I shall not in my part of this discussion include the nature of this reaction except to say that we may classify the reactions clinically into two groups: First, the seasonal or pollen type, and second, the perennial or non-pollen type. This classification is of course, arbitrary, but a satisfactory working one.

The seasonal type is represented by the so-called Hay Fever and Hay Asthma cases and the causative factors are proteids from flowering pollens. There is an early type from about May 15th to about July 30th, and a late type from about August 10th to October 15th.

In the second group, under the perennial classification the vasomotor disturbances occur at any time of the year following any of the various types of contact with the causative agent. In this type bacteria sensitization is included as well as articles of food and articles of environment of every nature, either through inhalation, contact or ingestion.

Sufferers from vasomotor rhinitis are usually of a nervous temperament and the condition is more commonly found in adult, male, city dwellers. The condition often runs in families and racial and geographical factors are of importance.

In uncomplicated vasomotor rhinitis the nasal passages present a somewhat characteristic picture. There is hyperemia, edema and hyperplasia, and elevation of hypersensitive areas chiefly found at the terminal endings of the branches of the spheno-palatine ganglion. In the acute stages the blood vessels are dilated, the membranes distended and the color pale red. Although the membranes are usually pale and boggy they may at times become deeply injected. The nasal passages may be entirely occluded, the membranes of the turbinates being in contact with the septum. Hemorrhagic spots may at times be seen.

The clinical symptoms of vasomotor rhinitis are too well recognized to spend much time on this phase. In general the symptoms are similar to those of an acute or chronic simple coryza without any systemic symptoms such as general body aching, fever, etc.

Of great importance are the many pathological conditions of the nose and nasal accessory sinuses commonly found in sufferers from vasomotor rhinitis, and these must be considered strictly as local factors complicating the disease. We frequently find a hypertrophic rhinitis; thickening of the septal mucous membranes especially at the junction of the cartilaginous and bony portions; deviations of the septum; spurs; adhesions between the turbinates and septum; polypi; adenoids; and sensitive areas of the nasal mucous membranes which when touched with a probe cause paroxysmal sneezing. The sneezing points or areas of the nose are at those points of contact between the middle and inferior turbinates and the septum, and therefore deflections of the septum, especially in the region of the middle turbinate or enlargement of the middle turbinate causing contact between the two, is another important local factor. The sensitive areas on the mucous membranes are reddened and slightly elevated. They may be due to a concurrent inflammation of the nasal accessory sinuses or to some change in the sensitive nasal branches of the spheno-palatine ganglion. The latter may be brought about by the former, and the local vasomotor disturbances in these areas would cause their elevation above the surface of the mucous membranes. Occasionally there may be noted a slight redness of the nasal membranes over the anterior end of the middle turbinate. There is often a relationship of vasomotor rhinitis to various forms and types of sinusitis,

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especially ethmoidal and frontal. It seems possible that the discharge of a sinusitis may so irritate the mucous membranes as to make it susceptible to irritations of pollens and proteids. In addition an individual may become sensitive to the bacteria or to the bacterial products which have caused the sinusitis.

In regard to the diagnosis of vasomotor rhinitis I shall deal briefly with the local manifestations. A careful history is always of importance and possibly more frequently than in any other phase of medicine a diagnosis may be made from this factor alone. Also well to remember is the fact that fifty per cent of patients suffering from vasomotor rhinitis are victims of multiple hypersensitiveness of various types.

In the clinical examination the condition of the nasal passages as mentioned in the nasal findings of vasomotor rhinitis as well as the many pathological nasal conditions associated must receive profound consideration in the making of a diagnosis.

Vasomotor rhinitis must be differentiated from chronic hypertrophic rhinitis, angioneurotic edema, sensitive and nasal hydrorrhea, and the various forms of sinusitis. I regret that time does not allow me to go into the rather fine differential points of the diagnosis.

In relationship to the special diagnosis, of paramount importance are the allergic tests. This subject is not in the scope of Rhinology, but I might say offers most in the way of diagnosis and treatment and eventual cure.

Of interest to the Rhinologist is the fact that a characteristic reaction ensues if a given soluble proteid in sufficient concentration is brought into contact with the nasal mucous membranes.

Another factor of diagnostic interest and importance is the subject of Eosinophelia. Nasal secretions normally have few cells. Eosinophelia is indicative of vasomotor rhinitis and varies from 10 per cent to 100 per cent of all cells present. In nasal infections in which a vasomotor rhinitis is not a factor the Eosinophiles are never present to an extent exceeding 1 per cent. During the quiescent stages of vasomotor rhinitis no Eosinophiles are noted in the nasal discharge.

A most comprehensive chart of the differential diagnosis of allergic and infectious conditions of the upper respiratory tract has been given by Dr. Milton Cohen of Cleveland in the Journal of the American Medical Association of October third, 1931, Vol. 97, pp 980-982.

The prognosis of vasomotor rhinitis should always be guarded. However, an increasing amount of relief may be promised if scientific treatment is instituted, and we feel safe in stating that in the last few years the Allergist, due both the improved methods of diagnosis and treatments have brought about more cures and more relief of symptoms than in all the centuries past.

The treatment may be divided into four groups: First, pollen extracts. Second, the removal of local morbid processes in the nose and nasal accessory sinuses. Third, the removal of the patient from the influence of the pollen or whatever factors act as the exciting causes. Fourth, the relief of acute symptoms.

Pollen vaccines will be taken up by Dr. Cohen as we Rhinologists do not consider this part of the care of the patient directly within our scope.

The second factor, namely the removal of local morbid processes is of the utmost importance. All pathologic conditions of the nose and nasal accessory sinuses should be eradicated and the membranes restored to a healthy, normal state. Without a "clean nose" little progress can be made in treatment of any type of vasomotor rhinitis, and we must never lose sight of the fact that the nasal pathological condition itself may be the causative factor. Sinusitis should be relieved, polypi removed, septal deformities corrected; —all during quiescent periods.

The third classification, namely that of removal of the patient from the environment of the exciting cause or causes needs no additional comment. The change may be merely from room to room or from one part of the country to another, depending upon the exciting cause.

The relief of acute symptoms of vasomotor rhinitis, the last classification, offers a large field for discussion, the subject matter of which has been passed down through the years of medical history. Many types and many ideas of treatment have been presented, discarded, and revived. I shall in passing merely mention some of the many methods advised, some new and some old, but like all therapy, whenever many drugs and methods are advised no one of them can be considered specific or entirely satisfactory.

Various mechanical devises in which pollen free air is obtained has brought relief in many cases.

Soft medicated sponges placed in the vestibules of the nostrils is one of the older remedies and prevents inhalation of irritants. Cauterization, either chemical or actual has for years had its place. This is often of real benefit if all circumscribed sensitive areas may be so treated. Here, actual cauterization should be done without anesthesia as otherwise the sensitive areas would be difficult to discover. When chemical cauteries are used in which the entire mucous membrane of the

nose is so treated, anesthesia may be used.

Electrical ionization and coagulation of the nasal membranes, and calcium iontophoresis. have been used recently with variable results.

Alcohol injections of the inferior turbinates, many other solutions also being used, is being done. In such cases anesthesia is obtained and for a time relief of symptoms, but absorption is retarded and the allergic theory is that such prevention of absorption is undesirable as the proteid retained locally in the nostrils will cause increased local inflammatory reactions, and that rapid absorption is desirable as when absorption is rapid little or no local reaction results and the body can better eliminate the toxins.

Alcohol injections have also been used directly into the sphenopalatine ganglion with indifferent results.

X-Ray, radium and the quartz light have been advocated and undoubtedly have a place in the treatment.

The endocrine theory which has many advocates, claims unbalanced endocrines influence the condition which is improved following glandular therapy.

Many claim relief by diet, but a study of this field is extremely contradictory as to types of diet used and results obtained.

The influence of the sympathetic and the parasympathetic nerves has been closely studied. Here, the idea is to remove the sympathetic fibers and stimulate if possible the vaso-dilators and secretory fibers of the parasympatheticus. On the whole, unsatisfactory results have been noted with this procedure.

Spraying the nose with increasingly strong solutions of the proteid extract to which the patient is sensitized causes desensitization in some cases and has been used extensively.

The rays of the 500 candle power incandescent lamp stimulates the circulation and therefore is of some value.

Non-specific foreign proteins have been used with variable results. The use of Saturated Solution of Potassium Iodide is to be considered as are nerve sedatives, general tonic care, cod liver oils, Ephedrin internally, Calcium, both Alkalies and Acids, and many other drugs too numerous to mention. It seems that all drugs in all their various forms have their enthusiastic advocates.

Among the drugs used locally may be mentioned Adrenalin, Ephedrin, Cotain, Sulphate of Quinine, Alkalies, Acids, Oils, etc.

Again I wish to stress that the best prognosis is offered by allergic desensitization and I am sure that Dr. Cohen will have some very definite and instructive suggestions to offer in this regard.

## VASOMOTOR RHINITIS FROM AN ALLERGIST'S VIEWPOINT*

Armand E. Cohen, M. D.

Louisville.

The first record found in medical literature having to do with the observation of vasomotor rhinitis was that of Leonard Botallus, who in 1565 published an article entitled "Two Short Commentaries of Leonard Botallus, Royal Physician of the City of Asta, The first on the Duties of a Doctor, The Second On the The Care of The Sick, Etc." In this article he states, "I know for a certainty of men who at the smell of roses were seized with a loathing as against their chief enemy and that to such an extent as to be subject to headaches or a sneezing fit or a running at the nostrils so that for two days it could not be stopped by rubbing. I know likewise of a woman who at the smell of musk would fall over, collapse and if she perceived it nearby would faint or be forced to vomit or have a severe headache. Therefore, doctors should refrain from using this perfume or any other that may affect his patient."

Despite these occasional observations of the earlier writers it was not until December, 1835 that Kirkmar, demonstrated upon himself the fact that pollen was the sensitive agent causing his own hay fever. Finally in 1903 Dunbar, through his researches set the stamp of finality on the pollen theory as the cause of the disease. Noon, in 1911 first established the active immunization therapy of a hay fever on a practical and scientific basis

In 1925 Pausnitz and Kustner demonstrated that the substance responsible for the immediate positive skin reaction in hay fever and asthma is present in the patient's blood and can be transferred to and fixed in a normal skin by an intracutaneous injection of the patient's blood serum. In 1925 Walzer, used this method to demonstrate the absorption of undigested protein from the gastro-intestinal tract. He showed that a normal individual having his skin sensitized with serum from an individual sensitive to egg or fish finds a positive reaction occurring in the passively sensitized area within a few minutes to two hours. He also reported that a reaction could be obtained in an area of skin locally sensitized to timothy pollen following the intravenous injection of timothy pollen extract.

E. L. Opie in 1924 had shown that in sensitive animals the antigen is fixed at the site of injection and may be recovered in large part from the inflamed and necrotic tissue. In 1929 and 1930 Milton Cohen injected 50

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normal subjects and 15 patients suffering from asthma, hay fever, or allergic rhinitis (none of whom were sensitive to ragweed) with the serum of a patient highly sensitive to rag weed. Twenty-four hours later ragweed pollen was blown into the nostrils of the 50 normal and the 15 allergic patients, and the injected sites were observed for the appearance of redness and wheal formation. The normal individuals showed a positive test in from 14 to 31 minutes while the allergic individuals showed a marked retardation in appearance time varying from a positive reaction in 41 minutes to no reaction in two hours.

These experiments are of tremendous interest because it revolutionized everything that was previously accepted regarding absorption of pollen and other allergens. Most of the surgical treatment in fact was based on the idea that absorption was greater in allergic individuals than in normal and such aged procedures as cauterization and calcium and zinc ionization denudation of the nasal mucosa, turbinectomies and so forth, had to be abandoned entirely or persisted in despite this most convincing evidence.

To obtain the best results in cases of allergic rhinitis the closest co-operation of the Rhinologist and the Allergist is essential. The Rhinologist, because of his ability and vast experience should be better able to differentiate the types of pathology in the naso pharynx. There are few cases of primary allergic rhinitis which after some time do not become secondarily infected, requiring local treatment in addition to hyposensitization. Finally certain obstructive growths such as allergic polyps may require surgical removal to increase breathing space and also to prevent secondary inflammatory infiltration. Most surgeons are convinced that it is best to relieve the allergic state first whenever practical; and a general axiom has been formulated, "Never operate for allergy but only for the relief of such pathology as would indicate surgical treatment regardless of the allergy present."

In the past it was particularly disheartening to the Rhinologist to observe the still soggy, obstructive membrane reappearing shortly after his patient has been subjected to sometimes radical, often repeated, internasal surgery, or to find a hypertrophic rhinitis converted into one a thousand times worse—an atrophic rhinitis, because some unsuspected allergy caused a marked edematous mucosa to deceive the unwary operator.

In one allergic clinic where I had the privilege of working, the average number of intranasal operations to which their definitely proved allergic rhinitis cases had been subjected to was seven. In my own experience the average has been less than 50 per cent which speaks well for the clinical judgment and integrity of the nose and throat men of Kentucky.

In the Kentucky State Medical Journal in April, 1934, I mentioned that I would report the results of treatment of colds, using cold vaccines furnished by the Kentucky State Board of Health. Four, eight, twelve, minims of vaccine were injected at weekly intervals for the first three injections and one injection of eight minims per month thereafter. The injections were made from November, 1933 to May 1934. This work was undertaken because a number of Allergists were talking of the possibility that a bacterial allergy existed and that common colds might be an allergic response to certain bacteria. Such allergy was demonstrated according to these men by injecting extracts of various bacteria, intracutaneously and that bacterial vaccine giving the greatest amount of irritation was considered the offending allergen. No satisfactory explanation was offered as to the inability to effect passive transfer, nor the fact that equally sore arms and red irritated areas could be produced with milk, peptones, or other non-specific proteins. I selected fifteen patients, all of whom were subject to frequent head colds and seven of whom were definitely allergic. Of this group nine reported that they had suffered from severe head colds, four that their colds were milder than usual and two had no cold. The study of this small group compared to control groups of other studies shows no particular efficacy from the use of cold vaccine as a preventative treatment. It likewise suggests that if bacterial allergy is a factor in the common cold it is not influenced by attempts at desensitization with mixed or so-called cold vaccines. Regarding the use of vaccines in allergic rhinitis there is some evidence that any foreign protein injected at weekly intervals over a relatively short space of time will lower the allergic state and in cases where a definite allergen cannot be determined I believe the use of vaccines and non specific protein a justifiable procedure.

The diagnosis and treatment of vasomotor rhinitis from an allergic viewpoint differs from the usual routine in the use of skin tests, elimination tests of food and environment, and treatment by rendering the patient hyposensitive using increasing injections of suitable extracts.

The most usual allergens to which patients suffering from vasomotor rhinitis are sentitive, are the inhalants namely: dust, pollen, perfumes, drugs, cosmetics, chemicals and animal emanations. Foods, particularly such seasonal foods as fresh fruit and vegetables are not infrequent incitors, but any of the foods

particularly the legumes, eggs, cereals, milk, and chocolate may act as offending agents.

Whenever it is feasible the offending allergen is removed from the patient's environment, otherwise, suitable extracts are made from the offending agents and the patient desensitized by gradually increasing subcutaneous injections. When the patient's tolerance is built up to the extent where he no longer has symptoms this point is maintained by semi-weekly or monthly injections for a period of at least two years.

The causes of failure to produce good results in at least 90 per cent of patients, providing that the proper diagnosis has been made is usually inadequate treatment. For instance in allergic rhinitis due to ragweed, I have found 60 to 80 injections of the ragweed extract and raising the patient's tolerance from 30,000 to 50,000 pollen units necessary for complete relief of the average ragweed hay-fever sufferer in this vicinity. Obviously 15 to 18 injections raising the patient's tolerance from 1000 to 5000 pollen units will be insufficient for the greater number of patients.

Despite all forms of therapy there still remains approximately 3 per cent of patients who will not acquire an immunity. This is probably due to some inherent mechanism and is similar to the inability of certain persons to acquire immunity to diphtheria following attempts to produce immunity by use of toxoid or toxin-anti-toxin. In fact the mechanics of the allergy phenomena is by no means a solved problem. The possibility of its relation to an endocrine, particularly adrenal disfunction, offers a tempting suggestion for research.

## DISCUSSION

**Joseph D. Heitger,** Louisville: An unfortunate thing about allergy is its complicated and confusing terminology. For example, in the cases shown upon the screen there were a number of classifications, all practically synonymous. Some allergists speak of atopy as being of the hereditary type and most frequently associated with eosinophilia. Others speak of allergy as being of the acquired type, and here they use the most general term of all, hypersensitiveness. Anaphylaxis is a term that is always confused in the literature. Some assert that it occurs only in the lower animals. In animals dying of anaphylactic shock, the shock organ varies. In the dog it is the liver; the guinea pig dies with severe bronchial patches; the rabbit dies of pulmonary thrombosis, or something of that type in the lung. In the two animals most frequently used for experimentation the shock organ is the lungs, but in one instance the smooth muscles is the contributing factor, while in the other it is the blood vessels.

The more one reads about allergy the greater becomes his confusion as to what the different writers are endeavoring to portray. What the real basic factor is we do not know. Still we have these patients coming to us with their symptoms and estimations do not satisfy them; they want results.

I happen to know of a number of very peculiar types of hypersensitiveness or allergy, or whatever you may choose to call it. I have a very good friend residing in California who practiced medicine there for many years and retired some years ago. The tiniest bit of honey will throw that man into an epileptic convulsion and he will be unconscious for eight or ten hours. That sort of thing is almost impossible to realize. I happened to be at a banquet with him one night when he went off into one of these attacks and that was the first I knew about them. Another young physician out there is very sensitive to veal. While in Boston, some relative of his invited him to Sunday dinner at which veal was served and he told them he could not eat it, because it was poison to him. A month or so later he was again invited to dinner, at which so-called "chicken-pie" was served. Without any suspicion of its being veal, he ate it, and when he had practically finished his dinner his hostess told him she had served veal in the guise of chicken because she wanted to prove to him that his fear of veal was all in his mind. He remarked that she had better call a doctor and that he would probably be unconscious by the time he arrived. He came very near dying and was in the hospital for three weeks.

When one hears of such severe reactions as these one cannot help but wonder as to its cause and why certain individuals should be so severely affected by certain foods.

The most effective remedy at our command in these cases is adrenalin. It is one of the most powerful stimulants of the sympathetic nervous system that we have, from which it might be inferred that the sympathetic nervous system is the seat of the trouble.

**Shelton Watkins,** Louisville: Some years ago Sir William Osler wrote: "To know syphilis in all of its manifestations is to know medicine." It seems that this same observation might almost be made of allergy. Its symptoms are very extensive and I believe a number of affections which are today being treated surgically will in the future be recognized as allergic and so treated. Those cases of so-called "appendicitis" in which the pathologists report little or no signs of acute inflammation, are probably allergic. The same is at times undoubtedly true in connection with the tonsils. I know a doctor's wife who developes an attack of acute tonsilitis whenever she eats fish and most meats. As long as she does not partake of these foods she does not have tonsilitis.

My view of Vasomotor Rhinitis is that it is a local manifestation of a general condition, namely allergy; and, that in such cases the rhinolo-

gist should, upon deciding that it is an allergic condition, send the patient to an internist, or a specialist in that line, for a careful study to determine the exciting agent and, also, to carry out the treatment. Of course, if there is a marked obstruction in the nose, such as a large polyp, it should be removed. Also, if a middle turbinate is much enlarged, or cystic, part of it might be cut off. And, an infected sinus should be drained. I feel, though, there should be a minimum of surgery and not with the idea of curing the case, but merely to put the nose in a better condition for drainage. Also, I feel that no operation should be done until after a general allergic study has been made and proper allergic treatment tried. If this is done not much surgery will be necessary. It is often most impressive how quickly in these cases the nasal symptoms will clear up when the cause is removed. And, on the other hand, how often polypi will recur when the cause is not removed.

In regard to the ionization treatment of Vasomotor Rhinitis, as advocated by Doctor Warwick, time alone will prove its merit. All of us can recall forms of treatment in our specialty which started out with the most glorious promise and in short time fell by the way side. One example of this in recent years is the use of x-rays in the treatment of chronic infection of the tonsils. Only a few years ago it was praised highly by many, today it is practically forgotten. The British tried the ionization treatment several years ago, at the same time the Germans did, and they also, with rare exceptions, have abandoned it. I doubt that Doctor Warwick's method is essentially different. Several weeks ago a Doctor Dick, of the Dick X-Ray firm, which is, I believe interested in selling these ionization outfits, came to my office to explain this treatment and asked me to send some cases of Vasomotor Rhinitis to the clinic mentioned. I decided not to do so, because the treatment did not appeal to me as a logical method of approach and, besides, I considered it too drastic. Many nasal treatments of Vasomotor Rhinitis have been tried and in rare cases striking "cures" have occurred, but the percentage of cures by any local treatment, in a large number of cases and over a period of several years, is very small, probably less than five. Doctor Howarth, of London, reported, about a year ago, in the British Journal of Laryngology and Otology, a case of Vasomotor Rhinitis which was "cured" by treating the inferior turbinates with silver nitrate.

Again I want to repeat that I consider the most logical method of dealing with these cases is to recognize that Vasomotor Rhinitis is a local manifestation of a general condition and to send the patient to an internist or an allergist for a thorough study from that standpoint. I believe that a much larger percentage of patients will be benefited by this method of approach than by nasal treatment. Also, I believe that nasal treatment is rarely lasting, because the pathological condition in the nose will in time recur and continue to do so as long as the cause producing it remains. The recurrence of nasal polypi after removal is an illustration of this point. Temporary improvement means little and if it not lasting, it is a great disappointment to the patient. It will take several years to test out this treatment thoroughly and I believe the final results will be very disappointing.

**E. C. Yates**, Lexington: Dr. Marks and myself have treated a few of these cases, some of these were not definitely allergic cases and in these our results were not so good. We are now trying to select cases that are definitely allergic, either through food or pollen sensitization. In the last few cases that we have treated the results, both subjectively and objectively, have been very favorable. Of course, we cannot foretell the final outcome.

**S. B. Marks**, Lexington: I have been experimenting with desensitizing agents for some time. I started out with aluminum sulphate and had some apparently remarkable cures. One man had not been able to sleep for three nights because of his asthma. I finally persuaded him to let me try aluminum sulphate and he said he was not coming back if it did not benefit him. Two days later he reported that he had slept the last two nights and thought he ought to have another treatment. I have not seen him since.

Some time ago a girl was led into my office by her mother and sister, suffering from a violent attack of asthma which had been going on for several days. I treated her with pure carbolic acid and she left my office relieved of her symptoms. Five days later after a rumble-seat ride she had a slight attack and I gave her another treatment. As far as I know she has had no trouble since.

We are now using a combination of zinc, silver and aluminum. It is prepared in two strengths and is very easily used either by applicator or spray. In some of our cases we have had very favorable results. In one case now under observation the chief manifestation is headache. As long as this patient does not eat pork she has no headache. Another patient under treatment became sensitive to pork about the middle of last winter. We took her off pork and she improved somewhat and then suddenly she went all bad. Skin tests showed her to be sensitive to almost anything and everything. Finally, after trying several changes of diet for three or four weeks without improvement, we gave her this treatment and aside from sneezing in the morning she is now very comfortable. Her nose presents a very different picture to what it was before. She now has a clean, pink mucous membrane with no oedema, but she certainly had some oedema after this treatment. She looked as if some one had inserted into each nostril an

oyster of magnificent size. This cleared up in forty-eight hours.

In the rest of our cases the treatment has not done much good except to alleviate the symptoms. We do not know where we are going but we have hopes.

**A. E. Cohen,** (in closing): I wish to thank the members of the section for their liberal discussion. While I do not concur with everything that has been said, I believe it is this free exchange of opinion that makes meetings of this type valuable. The ultimate benefit of the patient is the thing that counts.

I have noticed for the past four or five years that each Spring some particular form of therapy seems to be the vogue and at the close of the year, like out-modeled feminine attire, it is placed away to be followed by another fashion. Since 1931 we have seen this therapeutic parade of calcium, nitro-hydrochloric acid, acidogen nitrate and now electro-ionization, an old model refurbished, flirtatively, bids for the favor of the unwary. I predict a most short-lived existence for this revised procedure.

Dr. Heitger, mentioned that the literature and subject of allergy is burdened by a complicated nomenclature. This is probably true of every new science but as rapidly as possible allergists are attempting to correct the condition. For example, atopy, hypersensitiveness, anaphylaxis, idiosyncrasy, non-specific reactions, etc., are now generally called allergic. The term anaphylaxis, however, is generally used for designating the acute reactions obtained in animal experimentation.

Regarding the question of the age at which children outgrow food sensitiveness, it is generally conceived that children are most sensitive to foods during the first and second year of life. In fact any sensitivity that exists at that time is with few exceptions a food sensitivity. Thereafter there is a rapid decline of food sensitivities until the eighth year. From the eighth year and throughout adult life the inhalants play the most prominent role in both asthama and allergic rhinitis.

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**Meningococcic Meningitis.**—Slesinger observed a series of forty-two cases of meningococcic meningitis for periods of from six months to four and a half years following the acute ilness. Of these cases, 64.4 per cent showed no postmeningococcic sequelae at the end of the period of observation, and 35.6 per cent showed residual sequelae. The most common complications were hydrocephalus and deafness. The most common residual sequelae were deafness and speech defects. In general, postmeningitic patients showed good physical and mental development. The prognosis of meningococcic meningitis depends considerably on the type of organism that predominates during a given epidemic.

## NEWER MEDICAL TREATMENT OF GLAUCOMA*

Frank Pirkey, M. D.

Louisville.

In the treatment of glaucoma we are confronted with a disease which takes many treacherous forms. We are severely handicapped at the start by the fact that we are almost entirely ignorant of the underlying etiological factor. So that while our treatments are not altogether empirical they are at least mechanical.

Much work has been done in recent years to determine the real cause of glaucoma, the reason behind the mechanics of increased intra-ocular pressure but without any very definite success. We often hear the statement that glaucoma is probably of endocrine origin but to date research workers have not been able to prove the connection.

On the well founded assumption that the vitreous filtrate of man and the spinal fluid are of similar composition a great amount of study of the spinal fluid in the glaucomatous and the non-glaucomatous has been made. But these findings have failed to throw any light on the subject.

General conditions such as hypertension, nephritis, syphilis, etc., should of course be taken care of in the glaucomatous as in other individuals and we should of course remove any focus of infection such as abscessed teeth, but these conditions seem to have little effect on the disease.

The treatment of nearly every case of glaucoma should be surgical. Medical treatment can not approach the percentage of cures which we may obtain with surgery, and very often causes a dangerous delay. There are, however, cases in which we hesitate to operate and there are others in which the patient flatly refuses consent.

It is in these cases which we are called upon to make use of every available bit of knowledge which we possess and no aid however insignificant is unworthy of investigation.

Since eserine was introduced into Ophthalmology by Laquer in 1870 that has been our standby in acute cases with pilocarpin for its more gentle steady pull in the long drawn out chronic form. In the past decade some other drugs have come into use, and it is those which I wish to discuss today in hopes of getting a discussion of their value.

### Adrenalin

The use of adrenalin in the treatment of glaucoma really dates from 1923.

Prior to this Darier and Landolt experi-

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mented on animal eyes in 1899. In 1909 Rupert used adrenalin in the human eye. In 1914 Erdman made the first reports on the injection of adrenalin and in 1921 Knapp gave us his observations on the use of adrenalin in 65 cases of glaucoma. However it is to Hamburger who began his reports in 1923 to whom we are indebted for the first comprehensive work with this drug.

It is soon found that the ordinary 1:1000 solution had no effect on the average eye and that sub-conjunctival injections were dangerous on account of its effect on blood pressure. To avoid this Hamburger employed a synthetic dextro-rotary adrenalin which he named "glaucosan." His next step was the use of ordinary adrenalin in 1:50 solution. This 2 per cent solution he called "links-glaucosan," and advocated its use as follows: With the patient lying down 2 drops are instilled into the inner angle of the eye and the lids held open for thirty seconds. This is repeated from three to five times at fifteen minute intervals.

Gradle has evolved a very simple method by the use of adrenalin packs. After the eye is anesthetized with two or three drops of butyn, a cotton pledget soaked in 4 to 5 minims of adrenalin is placed in the upper cul-de-sac and left there for about four minutes. There seems to be no essential difference in the action of these methods; the glaucosan, links-glaucosan or cotton pledget having practically the same effect on tension.

Locally the effect of these concentrated solutions of adrenalin is to cause a marked constriction of the vessels, followed by a later relaxation. While we are not certain as to why the intra-ocular tension is lowered it is probably due to this secondary dilatation with its flushing of the ciliary vessels and the carrying away of intra-ocular fluid. The adrenalin causes a marked dilatation of the pupil sometimes accompanied by a primary rise of tension. This is usually followed by a marked decrease on intra-ocular pressure which attains its maximum about 12 to 24 hours after the treatment.

Reports of different observers vary both as to the action and the efficacy of adrenalin.

Piehel and others report that the tension is always lowered in simple glaucoma and that mioties have increased action after this treatment. Duke-Elder and Frank Law however find that the tension is sometimes lowered in simple glaucoma and sometimes not. They also state that the action is always temporary. Wright found it of little value after use in 100 cases.

In absolute glaucoma it has accomplished nothing as regards tension or relief of pain, while in the acute congestive type its use is contraindicated as dangerous. One field in which it has undoubted value is in that of fundus diagnosis. This gives us a safe means of dilating the pupil for the use of the ophthalmoscope.

In secondary glaucoma where the pupillary margin of the iris is bound down, I believe adrenalin to be of great value. I have used it a number of times in connection with atropin and have had more pronounced breaking up of the adhesions than with atropin alone. In several cases I have used the adrenalin alone with satisfactory results. These have all been in acute conditions. In cases of old plastic iritis with tension my results have not been so good. In most of these cases the adrenalin has had no apparent effect. However these cases hardly afford a fair test of any procedure as the iris is rather thoroughly sealed down to the lens. Of the different preparations available I prefer the cotton pack method of Gradle as it is the simplest method to use and seems equally effective.

Theoretically adrenalin seems to answer the indications in iritis glaucomatosa. It acts as a powerful mydriatic without increasing tension which is the end to be achieved. While most observers advocate its use in this condition some have found it disappointing and believe that it should only be used in simple glaucoma where there is no inflammation in the eye.

### Ergot

With ergot we approach the problem in a different way. In addition to raising blood pressure and contracting the uterus, it depresses the end organs of the sympathetic nervous system. Its use in glaucoma is based on the assumption that increased tension is due to hyperactivity of the central nervous system and that ergot will lessen the permeability of the vessel walls. The form employed is ergotamine which is sold under the trade name of gynergen on account of its use in obstetrics. This may be used as an injection 1-250 grain or orally 1-60 grain.

Thiel, Heim and some others report that tension may be kept down to normal in simple glaucoma over long periods of time by oral dosage of two or three tablets three times a day. Sigurd Werner reported in 1931 that his results were better with sub-conjunctival injections than with sub-cutaneous and that in 14 cases out of 18 tension was reduced for one to two days following injection. Glaven values gynergen very highly. The injection method seems to be more effective than the oral but the use of the hypodermic in treating the ordinary case over any length of time is of course impractical.

Gifford recommends gynergen in iritis glaucomatosa and in acute attacks. Lacat has obtained excellent results with gynergen in connection with pilocarpin and also calcium

chloride, and claims that this treatment will reduce tension in some cases when pilocarpin alone fails to work.

Gyncrgen seems to me a valuable adjunct to other treatments. It is absolutely harmless to the eye so far as we know and can be readily used in conjunction with pilocarpin or other drugs. The contraindication is high blood pressure.

### Hypertonic Solutions

It is a well known fact that causing the body to lose fluids will reduce the intra-ocular pressure. This has been made use of for some years by inducing sweating and by administering saline purgatives. Saline purgation will usually reduce the tension in acute inflammatory glaucoma and is an accepted method of treatment, but personally I am not in favor of this in most cases. These patients are suffering severely and are in a weakened condition and I believe that drastic purgation or violent sweating means the addition of one more burden for their resistance to bear.

With intra-venous injections of hypertonic solutions a marked drop of tension may be accomplished. This was first used by Catonnet in 1904. Duke-Elder used from 35 to 50 c. c. of 30 per cent sodium chloride solution. Lambert and Wolfe employed 200 c. c. to 300 c. c. of 5 per cent sodium chloride solution while others use about 150 c. c. of 10 per cent solution. All report a drop of the tension of about 40 per cent which occurs in from two to twenty-four hours. The same result may be obtained by using glucose solution which is usually available in most hospitals.

This marked reduction of tension may be very valuable in cases of acute inflammatory attacks. It can be used to reduce the pressure while waiting for an opportunity to operate and also affords an important means of preparing the patient for operation as our local anesthetic will absorb more readily if this treatment is given two or three hours before operation. It is of course contraindicated where there is cardio-renal involvement.

It is also useful in acute secondary attacks as a preparation for the use of atropin.

Calcium is used to some extent with the idea that it will decrease the permeability of the blood vessels. There seems to be no connection between glaucoma and calcium deficiency but some writers claim that they find it of value in connection with the other remedies employed and at least we can feel that it does no harm.

### Conclusion

While from our present knowledge these more recent drugs have in no way supplanted the use of eserine or pilocarpine they all seem to have a definite use in certain conditions. And while we know as little of glaucoma as we do, the importance of any drug which has a beneficial effect on glaucoma whether acute or chronic can hardly be overestimated.

### DISCUSSION

**A. E. Bell:** As the essayist has pointed out, the treatment of glaucoma is, in the main, surgical, but there are exceptional instances in which the patient refuses surgery or where the physical condition will not permit of surgical procedure.

Chief among what we speak of as the newer drugs in the treatment of glaucoma is adrenalin. Others are ergot, hypertonic solutions, calcium, etc., which have a physiological rather than a direct therapeutic effect. In view of our limited knowledge of the causative factors of glaucoma I feel, as Dr. Pirkey has pointed out, that each case is a law unto itself. We cannot lay down any hard and fast rules and apply them to all cases alike.

As to acute glaucoma, I have seen three cases in which adrenalin was used with very satisfactory results. Dr. Pirkey says he does not advocate its use in acute cases but a good many men disagree with him.

I think too many cases of glaucoma are regarded as non-infectious, so to speak. Many of these cases will be found to be secondary to an underlying focus of infection elsewhere in the body, perhaps a low-grade iritis or something of that sort.

In my own rather short practice, my greatest experience has been with infantile glaucoma, and in these cases I think the use of an adrenalin pack is of distinct value. Eventually, however these patients come to some sort of filtering operation and the trephine operation, I think, is the one of choice.

**Wiley R. Buffington,** New Orleans: This subject would be threadbare if we knew anything about glaucoma but, not knowing anything about it, we can go on talking forever.

As to operative and non-operative procedures, there is no disease in the world which requires that peculiar attribute known as surgical judgment to a greater degree than glaucoma—when to operate and what operation to do. I am going to limit my discussion to primary glaucoma.

Primary glaucoma must be divided into two types; (1) simple or non-inflammatory glaucoma, which is a separate and distinct entity; and (2) acute congestive glaucoma. It may be an endocrinal dysfunction, an endothelial toxin or a systemic toxemia, or maybe a vascular disturbance. Whatever it is that disturbs this balance, you have an increased oedema of the ciliary body and vitreous and the stage is set for a simple glaucoma.

As to treatment, in December last, I began additional experiments with adrenalin, or its synthetic equivalent, glycosin, which is now under the ban of the Pharmaceutical Department of the A. M. A. because of being commercialized. Never-

theless, it is a very valuable drug. What it does is to energize, so to speak, your treatment by eserin and pilocarpin. In December, 1930 I began to use it and to study its effects in simple glaucoma. I had an unfortunate experience in three acute cases before I learned how to use it. In two of these I thought it would lower the tension, but on the contrary it went up, and in one case the eye was completely lost. In another case which was essentially a simple glaucoma I precipitated an acute attack by the use of glycosin.

Simple and acute glaucoma are two separate and distinct diseases, both as to etiology and as to the course they pursue.

As to glycosin, I am still using it. For about two years in an endeavor to find out in which cases it was suitable, I used it in all cases, and during that time I had 104 cases of glaucoma. In some cases the results are so beneficial that it will actually cause you to reduce your eserin and pilocarpin. In one case with an everted uvula and the other eye gone, a hypertension case in an individual between sixty and seventy, the patient had a tension that I could not control and I finally got up to one per cent eserin. I did not want to operate on her. I then began using glycosin and after four instillations I was able to stop the eserin entirely, and for two years I kept the tension down by the use of glycosin, and after that by using pilocarpin alone.

First, it is expensive. One thing I have observed is that glycosin does not affect negroes with simple glaucoma as it does white persons. In some cases it has no effect, and it is useless to continue to use it. In some the effect is only temporary. As to the class of cases in which it has a constant beneficial effect, in my series, now in process of elimination, I have ten cases of glaucoma treated regularly with adrenalin, and I must confess I am using glycosin.

I treat these cases with pilocarpin mostly, and eserin, at the same time controlling the tension with glycosin. Once every two weeks they come to the office and get an instillation. The tension is taken every time. After one, two, three or four instillations the tension comes down. They come back in two weeks and if the tension is still down I do not use it. There are other cases in which it must be used more frequently. In this series I have two come regularly every week. The tension is taken every time, whether it is one week, two weeks or a month. To obviate the expense, we have several patients to come on the same day and one ampoule of glycosin at $1.50 will take care of four patients.

I am sorry that the drug has been commercialized and is under the ban of the A. M. A. It is very valuable but only if you continue the use of the other drugs. I have tried ergot and salt solutions but they are purely laboratory methods and have no place in the clinical treatment of glaucoma.

In acute glaucoma the only thing to do is to operate. In simple glaucoma you can either operate or use eserin and pilocarpin and finally adrenalin, the most effective preparation of which is the synthetic one, glycosin.

## SUCCESSFUL TREATMENT OF DACRYOCYSTITIS WITH LESS RADICAL SURGERY*

J. D. Williams, M. D.

Louisville.

It is not surprising, in view of the bacteria of every type, of the innumerable gross foreign substances that enter the eyes during every waking hour, and those by way of the nasal passages equally irritating, that the oculist is daily called upon to give his attention to the lachrymal system, particularly to the nasolachrymal duct and sac. In fact, the surprise is that any individual may escape serious disease of this region.

Rarely is there a congenital anomaly but not infrequently a plug of mucus obstructs and within the first few days of life must be removed by massage. However, the solution is not always so easy and then the surgeon must establish the channel with the probes.

A most annoying conjunctival-palpebral affection may be due to a contraction of the lower punctum or the reverse may be true, the disease beginning in the nose or as in case of trachoma, the whole tract being involved, and these must be treated coincidentally (by dilatation and irrigation) else a cure cannot be had.

A granulomatous ostium or an edematous inferior turbinal by pressure may occlude, hence in any involvement of the tract the combined efforts of both the oculist and the rhinologist may be required. Likewise the plastic surgeon, on occasion.

The diagnosis rarely presents difficulties, especially if the surgeon is both rhinologist and ophthalmologist since within the purview of the former comes the consideration of the nose generally, the ethmoids in particular, which last are next to the eyes in causal relationship. In the ultra modern mode allergy stands out in the etiology.

I would stress the suspicion of dacryocystitis if one eye alone presents a chronic conjunctivitis when no other satisfactory explanation can be found. When after perhaps years of epiphora comes tumefaction of the underlying tissues and attenuation of the sac walls takes place wherein their elasticity is lost so that the secretion has no force from behind and when a great foregathering of virulent organisms takes place, then a question

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can hardly be had as to the condition present.

Aside from the harrowing epiphora, the constant purulency, the cellulititis to which these patients are always exposed and the great danger to the integrity of the eye from the pneumococci invariably present, which cause innumerable eyes to be lost yearly, such treatment as is merited must speedily be made use of.

In a small percentage mere stretching of the lower punctum and irrigation will give a measure of or complete relief. Or gentle and graduated probing may evacuate the pus into the nose by dilatation of the strictures but this procedure is not painless under the best possible local anesthesia and must be repeated frequently, always with the prospect of a possible flare up at any time.

Should these fail and the patient be beyond middle age, or debilitated at any period of life, is in constant danger, since due to the extreme toxicity of the pus the slightest corneal abrasion may result in the loss of the eye (serpent ulcer), even within the first twenty-four hours, despite the most scientific regimen that may be prescribed.

Prior to comparatively recent years extirpation of the lachrymal sac was the final resort. Then came the intra-nasal procedures of West, Toti, Mosher, Koffler and others. Neither of these plans has found complete favor. The extirpation because of continued epiphora and because of the difficulties of removing every fragment of the atrophic sac, of the canaliculi and lining of the nasal ducts, else the pyorrhoea will recur at intervals, plus the occasional serious complication of orbital cellulitis. Again, scar tissue formation, with ectropion, should the sutures be not accurately placed. As well, must the careful operator give thought to the danger of serious corneal injury from insecure placement of the speculum.

However, as an emergency measure in respect to an extraction, or any intra-ocular operation, extirpation, with the alternative of tying off the superior neck of the affected sac, is only to be considered.

The many modifications of the West are proof that none is wholly satisfactory. The patency of the nasal opening, like that of all wounds in the nasal walls, is very difficult to maintain. The nasal septum, too, seems in conspiracy to defeat our efforts, the deviations being more often toward the affected side making a resection or a window opening a preliminary necessity, and most likely the anterior half of the middle turbinal to be snared away along with anterior cell exenteration.

By reopening the duct and its permanent maintainance, since one does not face the danger of its reclosure as in other operations, provided the tube is not too soon removed, thus by a minimum of surgery I have had complete restoration of its function without resorting to either of these more radical measures, in a number of cases during the past ten years.

If the duct is stricture free to the sac the punctum may not have to be slit, otherwise it cannot be avoided. This is practically painless if a cotton tipped tooth-pick wet in cocaine-adrenalin solution is laid over the punctum and held there by the closed lids.

In this fashion the anesthetic, of whatever strength, is not likely to affect the ocular tension. For the ordinary probing, which is full of discomfort at best, this is a valuable aid.

Then deeply about and into the sac beginning at the dome a two per cent novocaine-adrenalin solution is injected, as in extirpation. Generally one can, with patience and gentleness, introduce a probe to the bottom of the sac, progressively increasing the size until the largest one possible is used. If not, I think some force is justified and if entrance cannot otherwise be had as to the remainder of the duct I have no hesitancy in using considerable force, making a false passage ruthlessly, since one must enter the inferior meatus, a distance of approximately twelve to fourteen millimeters, however, not infrequently it is prolonged at the lower end in the thickness of the mucous membrance to a length of twenty millimeters.

Irrigation with normal saline or magnesium sulphate and adrenalin solutions is followed by the introduction of a fenestrated silver tube, the proximal end being bent at a right angle and beveled so that the tears may find a ready entrance into the canula, which, except for occasional cleansing, is allowed to remain for such length of time as will guarantee a permanent channel and this may require from three to six weeks or even longer.

In all cases where denudation of the underlying bone is found a suspicion of lues or tuberculosis obtains since the many and varied manifestations of the former are ever to be kept in mind.

There is, perhaps, nothing new here offered the desire being merely to urge this conservative procedure which in my hands has been entirely satisfactory.

Another successful method is to use a canula without the right angle through which is threaded a braided silk cord that has been stiffened with sterile starch, while under tension, or the cord in its natural state, made fast with a drop of collodion to a leader of silk worm gut, is pulled through. This is knotted at the distal end, the canula is removed, the upper end fastened by a knot, adhesive plaster or collodion, and following subsidence of the inflammation, daily back

and forth sawing movement of the cord is made after the usage of the Gigli saw until the operator is assured of a newly formed and permanent channel. The operation is performed in the office and the patient, after a few days, experiences no more than a mild annoyance.

The restoration of function according to these procedures is relatively certain with the surgical elegance of preservation of the sac.

**DISCUSSION**

**M. C. Baker,** Louisville: Some Chicago man, whose name I do not recall, made the statement a few years ago that all cases of dacryocystitis are of luetic origin. I think that is a rather extravagant statement, although I had a couple of cases in which I did extirpation of the sac, which apparently confirmed it. In both of these cases there was a discharge which cleared up promptly under the administration of iodides, and I watched them for several years afterwards but there was no return of the discharge.

I was glad to hear Dr. Williams strike the note of more conservative treatment of these cases because that has always been my policy. I have treated a number of these cases in children from birth to three years of age, and I have had good functional results in every one of them without doing any radical surgery. I recall one case in particular in a child under two years of age with marked dacryocystitis. By the use of a No. 1 Bowman probe—never larger than that,—and astringents, paying particular attention to the nose, I carried this child on to its sixth year, and now it appears to be permanently cured. I do not use large probes even in adults. It is a mistake to stretch the duct too much and it may defeat your purpose.

**C. Dwight Townes,** Louisville: Several instances of dacryocystitis in very old people came to my mind while listening to Dr. Williams' excellent paper. Three of these cases, which are under observation at the present time, were first seen with acute dacryocystitis. Under conservative treatment the acute condition subsided, and continuing the conservative treatment, patency of the duct has been established in each of these cases by gentle probing, slowly enlarging the duct up to the maximum and with occasional probings every two or three months these patients are comfortable and have had no recurrence. Therefore, I agree with Dr. Williams that conservative treatment will accomplish satisfactory results if we persist in it.

As to infants with stenosis of the lachrymal canal, I believe every one will agree that results are one hundred per cent. I have never seen a recurrence in any case that I have observed in my limited experience. One probing has always been sufficient where it was necessary at all. On the other hand, not only are the results of dacryocist-rhinostomy not always what we hope for but it is a very difficult operation. It is an exceedingly hard job to make a window and suture the membrane to the mucous membrane of the nose. I have done three of them and I have never been satisfied that I got any overlapping mucous membrane from one cavity to the other.

**Wiley R. Buffington,** New Orleans: I would like to hear the doctor explain his technic of introducing the canula into the nose.

**J. D. Williams,** (in closing): I quite agree with Dr. Baker as to his remarks concerning the syphilitic origin of dacryocystitis. Unquestionably the etiology is leutic entirely too frequently, giving point to the axiom that he who knows syphilis knows medicine.

My experience has been that all of these cases after the sac has been removed continue to have more or less discharge, and it is natural to expect it in view of the fact that the gland is still there and continues to secrete.

As to Dr. Buffington's question, the canula must be placed immediately the probe is withdrawn, else it is very difficult to introduce it if one waits until the inflammation has subsided. I never remove it for any purpose in less than a week or ten days. One can irrigate through the canula very nicely. It is left in situ until the swelling has gone down, then taken out, cleaned and put back again.

Answering Dr. Buffington's other question: The canulae can be gotton from the Max Wocher & Son Co., Cincinnati, possibly elsewhere.

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**Inequality of Blood Pressure.** Korns and Guinand analyze the data obtained by bilateral brachial pressure measurements in 1,000 normal subjects. What they have arbitrarily designed as a significant sphygmic inequality occurred 439 times in 378 persons. Significant inequalities in pulse pressures appeared in 274 persons, 67 of whom failed to show differences of 10 mm. or more between the two systolic or diastolic levels; nearly three-fourths of the higher pulse pressures were dextrolateral. These pressures were measured simultaneously in the two arms, but for all practical purposes consecutive measurement gives equally satisfactory results. Sphygmic inequality without organic disease is probably always transitory, and it is reasonably certain that all normal persons manifest it at one time or another. The inequality may involve only the systolic pressures or only the diastolic or both, and if the two levels are disparate the inequality may be concordant (both right higher than both left, or vice versa) or discordant right systolic higher than the left and left diastolic higher than the right, or vice versa). In some persons the higher pressure is irregularly heterolateral; in others it appears to be always homolateral. There is no evidence that right-handedness or left-handedness plays any part.

# A PRACTICAL CONSIDERATION OF ALTERATIONS OF THE VOICE*

Will R. Pryor, M. D.

Louisville.

To the general practitioner the larynx has always been more or less of a land of mystery. Up until a few years ago there was probably less known about this organ by ear, nose, and throat specialists than any other one single phase of their work. However when we consider that upon its proper functioning depends our ability to translate our thoughts and maintain contact with our fellow men and that through its narrow slit-like aperture must pass that vital essential oxygen to the lungs, there can be no doubt that a thorough knowledge of its structure, function, and pathology is important.

Very few physicians regardless of restriction of specialty are immune from contact with this organ at some time or another, for it forces itself into the realm of surgery, medicine, and even dietetics practically from the cradle to the grave. It has been aptly called the "watch dog of the lungs." To its trigger-like reflex response we are indebted for the passage of food into the esophagus and the aspiration of so few foreign bodies into the lungs. In a fraction of a second the epiglottis bends down, the laryngeal aperture narrows and the cords are covered by the muscular ventricular bands or false cords. This was forcefully brought home to me by some motion pictures of the mechanism of the larynx by Dr. LeJeune of New Orleans at the last Southern Medical meeting in Richmond. I was also rather startled at the tremendous force with which the cords come together in phonation.

The larynx is made up of cartilage, bones, ligaments, muscles, nerves, blood vessels, lymphatics, and mucous membranes. The intrinsic part with which we are concerned is protected by the thyroid cartilage and sets upon the cricoid cartilage. Above is the hyoid bone which is important as it is from it and its attached muscles that the larynx is suspended. The larynx proper consists first of three cartilages, one on top of the other, situated posteriorly. These have the power through muscular attachments of pulling the cords together. By the outrush of air from the lungs and flutter of the vocal cords in conjunction with this approximation of the cords, sound and speech are produced. Above the cords are the false cords or ventricular bands. In general, the interior of the larynx is covered by columnar ciliated epithelium except those parts which come in contact. These contact points are covered by squamous-celled epithelium which we find on the vocal cords.

All intrinsic muscles of the larynx are supplied by the recurrent laryngeal nerve except the cricothyroid which is supplied by the external branch of the superior laryngeal nerve.

The blood supply of the interior of the larynx is from the superior laryngeal branch of the superior thyroid artery and the inferior laryngeal branch of the inferior thyroid artery. The lymphatics are more plentiful posteriorly and anastamose freely.

A practical application of this anatomical relationship may be utilized in the diagnosis and treatment of the cut throat. As a rule these wounds are made with suicidal intent and involve the thyrohyoid membrane. If sufficiently lateral at this level it may involve the sensory nerve of the larynx and its accompanying artery. Due to the resulting anesthesia the protective mechanism of the larynx will be impaired and if bleeding is profuse the patient may drown in his own blood. The problem here is to stop hemorrhage and establish an open airway. If the emergency is great a long tracheotomy tube may be passed through the pharyngotomy wound down between the vocal cords thus preventing aspiration and enabling the operator to have more time to stop hemorrhage. Later, particularly if there is edema, a tracheotomy may be done.

The larynx is rather well supported and protected by the thyroid cartilage which is strong and resistant. Fractures of this are often attended by alarming sequelae, the gravest being encroachment on the airway with resulting dyspnea and possibly asphyxia. The first move is to facilitate respiration which makes a tracheotomy imperative. After this is done any fracture may be reduced or hematoma taken care of.

Alterations of the voice and respiratory mechanism may originate from birth. Given a young infant with dyspnea what is to be considered? There could be a congenital web, a papilloma, a compression of the trachea by the thymus or what is more frequently seen, just a collapsing orifice in which the entire intrinsic larynx seems to suck in with inspiration. It passes away with the growth of the child. In a young child with or without temperature, a croup cough and signs of obstruction to breathing we are faced with urgent need for a diagnosis. It may be laryngeal diphtheria, catarrhal croup, streptococcus laryngitis or a foreign body. Direct laryngoscopy alone will tell. We are enabled thereby to inspect and if in doubt take a culture. The most frequent of the above condi-

*Read before the Eye, Ear, Nose and Throat Section of the Kentucky State Medical Association, Louisville, May 17-18, 1934.

tions, catarrhal croup, is caused by a swelling in the trachea just below the cords. It is amazing to observe through what a tiny aperture a child can get air. Papillomata usually occur on the cords but may occur in the trachea or the false cords or on the epiglottis. I was referred to a small boy about three years ago who had hoarseness and extreme dyspnea with a collapse of the left side of chest. No breath sounds were obtainable upon that side and atelectasis was considered. Laryngeal examination revealed papillomata on both cords and hanging down into the interchordal space. All symptoms disappeared following their removal.

The one most common symptom that brings the laryngeal patient to his physician is hoarseness. As the general practitioner is the first to see a great many of these cases it is urgent that he be able to distinguish the harmless from the potentially dangerous, in other words to distinguish the simple acute laryngitis from the chronic or complicated larynx. A close questioning as to the duration of the hoarseness will in the vast majority of cases give the necessary information. If one axiom would be followed hundreds of thousands of lives would be saved. Any case of hoarseness which lasts longer than a month is not a simple acute laryngitis and should be seen by a laryngologist. Any one who has observed the last days of sufferers from carcinoma or tuberculosis of the larynx will not argue the veracity of this statement. If the patient has, in addition to hoarseness, shortness of breath we can be sure we are not dealing with a simple laryngitis of short duration.

The one method of treatment giving best results in the acute or chronic catarrhal affections of the larynx is rest of the voice. This does not mean talking in a low tone or whispering. It means absolute voice rest with use of pad and pencil for communication. Inhalations help but the second best weapon at our command is silver nitrate applied locally. I have seen large contact ulcers of the vocal cords and arytenoids clear up from prolonged vocal rest alone.

Given a patient with hoarseness, persistent or recurring hoarseness, what conditions must we consider? In their order of frequence they are chronic laryngitis, tubercular laryngitis, cancer of the larynx, syphilitic laryngitis and paralysis. The chronic larynx is a problem for the internist as well as for the laryngologist. Is the underlying cause bad teeth, bad sinuses, bad tonsils, a deflected septum or does the patient indulge too heavily in the use of tobacco or alcoholic beverages? Is he constitutionally below par or has he a gouty diathesis? These are questions which must be answered by throat specialist and internist together.

Tuberculosis of the larynx is never primary It is always associated with tuberculosis of the lungs. I have had three or four cases which for a time almost made me doubt the truth of this statement. Their pulmonary histories were absolutely negative and there was nothing on physical examination. Yet there was in one case a massive involvement of the epiglottis, typically tubercular, and in another infiltration of the epiglottis and both arytenoids. However a careful x-ray showed an old healed lesion in the lung. These patients and two others had been subjected to prolonged anti luetic treatment. One had been diagnosed as a Vincents infection.

Constitutional treatment and rest of the voice combined with the introduction of direct sunlight into the larynx by metallic mirrors have been long in use and will cure many cases of tuberculosis of the larynx. However, during the past five years another great therapeutic agent has come into vogue. It is the electrocautery. I have with it, been able to melt away infiltration and heal ulcers which heretofore had resisted all other types of treatment. Tubercular infection does not become painful until it invades the external larynx. Then the pain on swallowing may become agonizing. I will never forget seeing, as an interne, one poor sufferer literally starving to death with saliva drooling from his mouth, unable to swallow even liquids. Applications of the electrocautery stops this pain almost immediately and are able, provided there is improvement in the chest condition, to heal the lesions in the larynx or mouth.

Syphilis of the larynx is usually of the tertiary type. There is a diffuse redness of the organ and the ulcers have a punched out appearance. These patients rarely experience the pain of the tubercular lesion as it advances extrinsically. Knowing the ubiquitous character of syphilis any lesion whose identity is not absolutely clear cut should warrant a Wassermann test.

In the background of every case of prolonged hoarseness stands that grim captain of death—cancer. Out of every thousand deaths one hundred die of cancer. One and eight-tenths of these die of cancer of the larynx. Its incidence increases with advancing years, the optimum age being between 50 and 65 years. However cases have been reported as early as sixteen years. As long as the malignancy is inside the larynx the patient has a chance, in fact a very good chance, for complete permanent recovery. Tucker states that in intrinsic cancer early diagnosis offers a lasting cure in from 70 to 80 per cent. This is a vastly higher percentage than is obtainable with cancer in any other part of the body. The objective signs

which these patients present to the physician are the same as with any other chronic laryngeal condition. Upon examination with a laryngeal mirror the lesion resembles a tubercular process in that it is unilateral. However its characteristic site is in the middle or anterior one-third of the vocal cords, tuberculosis showing a predilection for the arytenoids and posterior one-third. In all cases there is but one way to diagnose an early malignant lesion—that is by a biopsy. If the microscopic examination shows a benign growth we should not be content but a recurrence should be carefully watched for, any number of tissue removals being made. There has in the past been a hue and cry that such procedure would cause a rapid spread of the malignancy. This has not been substantiated by the statistics of large clinics. Jackson has never observed metastasis due to a diagnostic excision of a laryngeal tumor. However I feel that as soon as a positive diagnosis is made a laryngectomy or laryngofissure should be done immediately.

Many of you doubtless heard Dr. Max Cutler speak at the Jefferson County Medical Society least year. His report on results obtained on inoperable cases from massive deep x-ray therapy and irradiation gives some hope for cases which come to us too late for operation.

Suppose a patient consults the laryngologist complaining of hoarseness or loss of voice. The history is not significant and examination of the larynx shows the cords to be normal white and glistening. It can be but one thing—a paresis or paralysis. Here again we must fall back upon the internist for assistance. By following the course of the recurrent laryngeal nerve we frequently find the cause. If peripheral there may be pressure from cervical glands, an enlarged thyroid gland, a tumor in the mediastinum from an aneurysm or an enlarged heart. I have seen a number of cases of paralysis of a cord due to adhesions in the lung from an apical pleurisy. If associated with dyspnea there may be a central lesion which gives bilateral abductor paralysis, that is leaves the cords together. This is seen in locomotor ataxia. It is a condition to hold in mind in encephalitis lethargica.

We, all of us, see people who have very low pitched voices who are never able to speak loudly and at times lose the voice. Laryngeal examination shows that the cords do not quite come together. This is a functional thing and associated with no organic lesion. If your patent suddenly loses her voice and is speechless for a period of from a few days to several months and as suddenly recovers it, you are dealing with a hysteria. I have seen only one man with this ailment.

## DISCUSSION

**Joseph D. Heitger:** There is one point I would like to emphasize in regard to hoarseness which lasts longer than a month. Last year in California there was considerable activity among medical circles on the subject of cancer and I attended many meetings and listened to many papers. Strange to say, almost every form of cancer was discussed except cancer of the larynx, which was not even mentioned. The importance of this condition is frequently overlooked. We saw cancer of the larynx frequently at the Los Angeles General Hospital, because there are so many old people out there. Some of them were operable and others gave a history of hoarseness lasting several months, which had been treated by gargles and other simple remedies. In most instances no laryngological examination had been made, not even with a mirror. I agree with Dr. Pryor that any case of hoarseness lasting longer than a month or six weeks should have a laryngological examination to determine its etiology.

The question of biopsy in these cases has been discussed pro and con for many years, and has become more popular in the past year or two because the technic has been so vastly improved. Furthermore, the surgical mortality has been so greatly reduced that most of these patients are willing to accept surgery as soon as a positive diagnosis has been established by biopsy instead of waiting for three or four months.

In the presence of an obscure lesion in the larynx, have a biopsy made, but don't do it until you have the consent of the patient to submit to proper surgical procedure in case malignancy is found.

**M. C. Baker:** I want to say a word about benign affections of the larynx. For instance, acute laryngitis is caused partly by toxaemia, partly by infection and partly by improper use of the voice. In treating these cases we must clear up all of these conditions. We must clear up the intestinal toxaemia, find the source of infection whether it be the tonsils, the sinuses, or what not, before the laryngitis will get well. Also, as Dr. Pryor has pointed out, resting the voice is a very important part of the treatment.

As Dr. Watkins has emphasized, the duration of an acute laryngitis is from 3 to 10 days, and a case in which hoarseness persists for a month or six weeks is to be regarded with suspicion.

Some years ago I saw a high school pupil with hoarseness persisting for a period of several months. In every other way he was apparently in perfect health. I sent him to a vocal teacher who vocalized him on the broad vowels and in a couple of months he showed marked improvement. He went on to graduation, won first prize in oratory and became valedictorian of his class. I have had two other similar cases and with the help of a vocal teacher their trouble disappeared, and their voices were restored to normal. All

of these cases were in adolescent boys and girls and I mention them to emphasize the fact that consideration must be given to the training and proper use of the voice in many cases of hoarseness instead of immediately turning to surgery for relief. We sometimes see similar cases in adults, especially public speakers. They get in the habit of assuming a deep bass voice, talking way down in the throat, and finally this results in failure of the cords to approximate and we have so-called clergyman's sore throat. In these cases proper training and use of the voice will often restore it to normal without any great amount of medical treatment.

**S. S. Watkins,** Louisville: It should always be kept in mind that more than one of the three most common chronic affections of the larynx—cancer, syphilis and tuberculosis—may occur in the same patient. A number of cases have been reported in the literature. About a year ago Professor Chevalier Jackson reported one in which cancer and tuberculosis occurred together.

Lesions in the larynx of these three diseases are often not typical in appearance and the textbook pictures of them are the exception rather than the rule. Biopsy should always be done in doubtful cases.

As Dr. Pryor and others have emphasized, in cancer of the larynx operation should be carried out as soon as possible, because every day counts.

In regard to persistent hoarseness, I would suggest that Dr. Pryor reduce the time from a month to two weeks or ten days. Any acute laryngeal infection will, under the proper treatment, clear up, or show marked improvement, within ten days. Of course, cases of simple chronic laryngitis last much longer than that. However, it should be a rule with general physicians that when hoarseness has persisted for ten days to have a careful laryngeal examination made. If the usual general examinations and tests are negative and there is doubt about the appearance of the larynx, a specimen should be taken for microscopic study.

**E. C. Yates,** Lexington: There are several factors which enter into a discussion of this subject which Dr. Pryor failed to mention. One, which we do not see in this country, is leprosy. Another, which we see often, is amyloid disease, which may be primary. Dr. J. O. Beavis reported six or eight cases in an article published in the last issue of the Archives of Oto-Laryngology.

One point brought out by Dr. Pryor that I wish to emphasize is the necessity for biopsy before any radical surgery is done in these cases. Some years ago in a discussion of this subject at the American Laryngological meeting, the ear, nose and throat men came in for a lot of criticism for not being sufficiently adept in clinical diagnosis to differentiate between some of the chronic infectious granulomata, particularly tuberculosis and syphilis, and carcinoma of the larynx. After a lot of discussion, pro and con, old Dr. Yankhauer related an incident that impressed upon all the importance of a biopsy before doing any radical surgery. He said that years before, when he did his first laryngectomy, a biopsy was not made, and that after the larynx had been removed it proved to be tuberculous.

My chief, Dr. Canfield, had a habit of getting each of us off into a corner and getting our opinions separately. I recall on one occasion we had a case of tumor of the larynx, and one man thought it was tuberculous, another syphilis and another thought it was a carcinoma. It developed that the patient had a four-plus Wassermann, a very extensive tuberculosis and a carcinoma of the larynx. This case also emphasizes the necessity of a biopsy before any type of radical surgery is attempted in these cases.

**W. R. Pryor,** (in closing): I wish to thank Dr. Yates for completing the picture. I did not mention the conditions to which he refers because, although I have read of them in literature, I have had no practical experience with them. In taking a biopsy I usually use a Hasslinger Laryngeal biting forceps and have not found it difficult to remove sufficient tissue transglotticly by the indirect method. It is the part of wisdom to be sure to secure sufficient tissue because sometimes the malignant area will be found in only one tiny portion of the specimen.

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**Serum in Treatment of Measles.**- Dulitskiy points out that popularization of the "creche" idea brought about a more urgent need of safeguardng against contagions. The most important of these is measles, owing to the high mortality of the disease in the first year of life. Because of difficulty in obtaining convalescent serum for immunizing purposes, Degkwitz suggested the use of adult blood serum on the assumption that approximately 90 per cent of all adults had had measles. The author suggested in 1924 the use of placental blood obtained a few minutes after the delivery. The dose adopted, 20 cc., was not sufficient to prevent the disease, but resulted in a mild course and insignificant mortality. It was of advantage to institutions to have the children pass through a mild course and acquire an active immunity instead of a temporary passive immunity conferred by the use of a sufficient amount of adult blood serum or placental blood serum. Parents bringing a child to the creche are obliged to give blood for the preparation of the serum. The influence of immunization on the mortality was strikingly demonstrated by a reduction of the mortality in children under 1 year of age from 39.6 per cent to 4.6 per cent, and in children from 1 to 3 years of age from 19.8 per cent to 2.8 per cent. No difference was noted in the effect of adult blood serum or placental blood serum.

# PRIMARY CARCINOMA OF TUBE, REPORT OF CASE*

L. Wallace Frank, M. D.

Louisville.

Patient, Mrs. H., female age 60. Was married at the age of 24, and has borne three children. Except for some minor ailments, has always been well. Menopause occurred fifteen years ago at the age of 45.

Clinical History: Five days before we saw her she had begun to have a small amount of vaginal bleeding, passing a quantity of dark, watery blood; no clots. About the same time she developed pain in the abdomen accompanied by a moderate amount of vertigo. For some years she has had frequency of urination and some tenesmus. Had never noticed any blood or macroscopic pus in the urine. Dr. James Stites had cystoscoped her and found the bladder perfectly normal. Blood count showed: Red cells, 4,400,000; haemoglobin 86 per cent; leucocytes 11,000; polys 61 per cent.

Urinalysis negative except for trace of albumin and a few pus cells.

Physical examination was negative until the pelvis was reached. Here we found the uterus enlarged, and on the left side there was a mass which seemed to be fixed and we suspected the possibility of an intra-ligamentary fibroid. In view of the history of vaginal bleeding, a diagnostic curettage was advised and carried out. When the cervix was dilated about two ounces of a thin, bloody serum escaped. The uterus was curetted and there was no evidence of any neoplastic tissue, not even an overgrowth of the endometrium. The mass previously mentioned was easily made out while the patient was under the anesthetic and, believing that she might have an intraligamentary fibroid, hysterectomy was advised.

Operation was done on October 6th. Examination revealed the uterus somewhat enlarged but perfectly free. Upon exposure of the mass which we had thought might be an intraligamentary fibroid it proved to be an enormous hydrosalpinx. The tube measured two inches in its greatest diameter and was six inches in length, densely adherent and separation was very difficult. In accomplishing this a rent was made in the wall of the tumor which permitted leakage of some of its contents which was immediately aspirated. The tube and ovary were removed, the vessels ligated and the edges turned in. Exploration of the abdomen revealed no further pathology.

Some of the tissue was sent to Dr. A. J. Miller for examination and somewhat to our surprise he reported a primary carcinoma of the tube. This condition is sufficiently rare to warrant reporting. In looking up the literature I could find no record of a similar case reported by Dr. W. O. Johnson and Dr. A. J. Miller. I found a report of two cases by Dr. Wm. S. Smith, of Brooklyn, N. J., in one of which the disease had been limited to the tube and in the other there had been secondary involvement of the uterus, and the pathologist had reported the growth to be primary in the tube and secondary in the uterus.

Another report appearing in the January, 1932 issue of the Canadian Medical Journal by Dr. J. P. Kerns, describes a primary carcinoma of the tube operated upon with recurrence at the end of five years, and subsequent death of the patient.

Apparently the chief symptom, and the only one that is constant in all these cases, is vaginal bleeding which leads us to the conclusion that in the presence of vaginal bleeding, with no evidence of carcinoma of the body of the uterus or any definite stenosis about the cervix, especially in elderly women, malignancy of the tube must be suspected, or granulosa cell carcinoma of the ovary suspected and section advised.

## DISCUSSION

**John W. Price, Jr.:** Dr. Frank's report illustrates a very rare condition and at the same time emphasizes the importance of following up every instance of uterine bleeding occurring in a woman past forty years of age. It is abnormal and is frequently associated with either a benign or a malignant growth. In women who have passed the menopause as long as ten years, abnormal bleeding is more frequently the result of malignancy of the uterus or ovary than of a benign tumor.

**Louis Frank:** I agree with Dr. Price that vaginal bleeding in women who have passed the menopause as long as eight or ten years is strongly suggestive of carcinoma somewhere in the genital tract. There could hardly be any other reason for haematometra in a woman of this age who had borne children and gone through a practically normal climacteric. However, this did not occur to us at the time we explored the cavity of the uterus in the case under discussion.

As has been pointed out in the report, primary carcinoma of the tube is an extremely rare condition, only about 250 cases having been recorded in the past hundred years. It may be, as Dr. Miller has suggested, that many more cases have been overlooked due to the fact that the tube is not always sectioned upon finding a carcinoma. Ewing says that the malignancy of this condition equals the malignancy of carcinoma of the cervix. Most of the cases on record occurred before the advent of radiation therapy. It is our purpose to subject this patient, not only to intra-

*Read before the Louisville Medico-Chirurgical Society.

uterine radiation with radium, but also to institute deep x-ray therapy over the lower abdomen, especially at the site of the uterus, and the pelvis. I believe that more is to be accomplished by deep x-ray therapy in these cases than by the use of radium, but we intend to use both.

It is interesting to note, as pointed out by Dr. W. O. Johnson and Dr. A. J. Miller in a recent review of the literature on this subject that in only one recorded case was preoperative diagnosis made. As in many other conditions, it is usually recognized that some pathology is present, but there are no symptoms or physical findings by which the character of the pathology may be definitely established, and we must rely upon the pathological report for the ultimate diagnosis. In the case reported we did not suspect the true condition and were surprised by the pathologist's report.

One reason for the high mortality rate in these cases is that in many instances the disease has progressed to the point of perforaton of the tube itself and implantation in the abdominal cavity or elsewhere before the primary condition is discovered and removed. I am of opinion that, with early discovery, accidental or otherwise, and removal of the tumor, the mortality rate is not, as suggested by Ewing, comparable to that from carcinoma of the cervix but more nearly parallels that from carcinoma of the body of the uterus. In other words, it is really a very favorable site (if there is such a thing) for the development of a carcinoma provided it be detected and removed early enough. We know that cancer of the body of the uterus metastasizes slowly because we do not have the same lymphatic drainage in the body of the uterus, nor in the tubes, that we find in the cervix which is responsible for early implants in the inguinal glands. Bearing in mind this difference in the lymph supply, we can readily understand that carcinomata in the body of the uterus or in the tubes do not develop and metastasize with the same rapidity as cancer of the cervix.

**L. Wallace Frank,** (in closing): The article by Kerns, referred to in the report, quotes a review by Doran in 1910, of 38 cases recorded in the literature and since that time probably five or six additional cases have been recorded. Secondary carcinoma of the tube is not uncommon and is explained upon the hypothesis that tumor cells floating in the abdominal cavity close to the fimbriated end of the tube are swept into the tube and there develop. The method of metastasis of primary carcinoma of the tube is by direct extension through the serosa of the tube or by implants to adjacent structures through the fimbriated end of the tube, or through the mesosalpinx back to the lumbar glands, the lymphatic supply being rather rich.

In my opinion, the end result in this case should be good. Apparently the growth did not involve the serosa of the tube and while the ovary was adherent in the pelvis, the tube itself was fairly free. With intrauterine radiation to overcome any implants which may have extended through the tube into the uterus, and with transabdominal radiation with high voltage x-rays we should be able to reach any cells that may have been left behind. Therefore, I believe the outlook is favorable. In many cases of this kind the condition is not infrequently mistaken for inflammatory trouble, the adhesions are separated the diseased tissue removed and nothing further is done. It may be that the apparently infrequent incidence of this condition is due to the fact that is it frequently mistakenly diagnosed as inflammatory. Perhaps routine pathological examination in such cases would show that primary carcinoma of the tube is not as rare as is comminly believed.

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## CHYLOTHORAX, WITH REPORT OF CASE*

Drs. R. L. Bone and F. P. Strother, M. D.

Madisonville.

The rarity of Chylothorax, only fifty-five cases having been reported to date, and because of several unusual features presented in this case, renders it of sufficient interest to merit placing it on record.

Case: E. M., female, white age 71, housekeeper, mother of four children, all living. She was never ill until one year ago when she first noticed moderate dyspnea on any unusual exertion such as climbing stairs or lifting. She was found at this time to be suffering from hypertension, blood pressure ranging from 160-85 to 200-110. No apparent arteriosclerosis, occasionally slight dizziness or vertigo. There was no marked change in her condition for the ensuing ten months, other than it required less exertion to produce dyspnea.

Family History: Father lived to be 82, mother 78. One sister died at age of 40, pulmonary tuberculosis. One brother died 56, cerebral hemorrhage. One died at 60, vascular accident, possibly cerebral hemorrhage. One brother died at 58, coronary occlusion. One sister is living, age 75, in good health.

The gradually increased dyspnea and lumbar pains forced her to take her bed April 20, 1934. The lumbar pains slowly subsided and dyspnea improved temporarily. Up to present state of the illness she had had no elevation or subnormal temperature, pulse 100 to 108, respiration 20 to 26, no chest pain or cough.

May 1st, upon examination by Drs. F. P.

*Read before the Hopkins County Medical Society.

Strother and R. L. Bone the following conditions were found: Patient extremely dyspneic, pulse 110 to 112, respiration 30 to 36, temperature normal, no cyanosis or edema. The apex beat in right midclavicular line, no expansion of left chest. She gave history of having had profuse sweats. On percussion there was entire flatness of left chest and tubular breathing over small area of upper left lung. Diagnostic aspiration revealed a creamy liquid material that was construed to be pus for reasons given below. History of profuse sweats, W. B. C. 17,000, 90 per cent polys. On appearance of aspirated fluid and polynuclear leucocytosis, it was concluded that an empyema was being dealt with, notwithstanding the absence of fever. Patient immediately taken to hospital and under local anesthesia a portion of the eighth rib was resected in axillary line, with syphon drainage. The peculiar appearance of material that escaped while introducing drainage tube first aroused the suspicion that something other than an empyema was being dealt with.

An examination of the fluid revealed it to be creamy in appearance, Sp. Gr. 1017, reaction alkaline. On shaking with ether it did not entirely clear up, but with addition of 10 per cent solution of Sodium Hydroxide it became perfectly clear. Microscopically it showed a few white and red blood cells, also numerous bodies resembling fat globules. This fluid on standing several days gave no evidence of decomposition and a creamy layer of about one-half inch was found on top.

May 2nd, at time of drainage, it was estimated that about 500 c. c. of fluid escaped during insertion of drainage tubes. The following twenty-four hours drainage was 3000 c. c. The next two days drainage was 500 c. c. After this date there was very little drainage and the tube was removed on the sixth day. Wound healed without any infection. During this period pulse ranged from 100 to 116, respiration from 26 to 30. On May 14th an x-ray of chest was made, but due to the extreme weakness and nervousness of patient, plates were not entirely satisfactory. They showed dense cloudiness extending up left side to clavicle with a marked displacement of mediastium to right. There was no evidence of fluid in right chest.

May 16th patient was taken to her home. Pulse ranged from 100 to 106, respiration 24 to 28. Appetite was improved, rested fairly well and apparently gained some strength.

May 22nd dyspnea increased, necessitating aspiration again. Left chest aspirated, 3200 c. c. fluid. June 5th, 3000 c. c. aspirated. June 7th, 1000 c. c. aspirated, and that afternoon x-ray plates made in upright position, (portable machine). Plates showed the diaphragm back in normal position with moderate amount of fluid remaining in left chest, and a beginning accumulation in right chest. Also showed a shadow under left clavicle which was rather ill-defined, and it could not be definitely determined whether or not it was a growth.

June 11th, 1450 c. c. aspirated. On this date R. B. C. 4,880,000; W. B. C. 13,200; Polys, 90 per cent; Lymph, 8 per cent; Mononuclears, 1 per cent; Eosinophiles, 1 per cent; Hemoglobin, 70 per cent.

June 11th, 1450 c. c. aspirated. On this date 650 c. c. aspirated from left chest, and 715 c. c. from right. June 24th, 800 c. c aspirated from left chest and 850 c. c. from right chest.

The noticeable features of this case are as follows: (1) No history of trauma preceding the attack. (2) No elevation of temperature at any time. (3) A persistent Polynuclear Leucocytosis, either relative or absolute. (4) Absence of any abdominal accumulation. (5) Notwithstanding the loss of 15765 c. c. of chyle during the past seven weeks she is apparently as well nourished as she was at the beginning of her illness.

The necessity for aspiration is becoming more frequent and is always evidenced by beginning nausea and inability to resume the recumbent posture, both of which are temporarily relieved by aspiration.

## CASE FOR DIAGNOSIS
## CASE REPORT*

Virgil Simpson, M. D.
Louisville.

This patient was 17 years of age, normal birth, growth and development. Had had measles, mumps, chickenpox and whooping cough with no complications. Had suffered no serious illness. Entered school at 6 years of age. His grades were above normal. His play and social instincts were normal. His father, aged 35, living and well; mother, aged 36, living and healthy; one sister, aged 12, living and well. There was no family history of transmissible disease. Was admitted to a local hospital from ambulance at 10:40 A. M., August 21, 1933, being referred by the family physician with the following history:

About July 6th, 1933, while picking berries at grandfather's farm, had pain in left foot and leg, of sudden onset; had to go home on account of the pain; the skin became purplish, subsided in a few days; then a similar condition developed in the right foot. He limped around home with a cane after each attack, gradually improved and by August 1st was working some. On August 7th had an attack of nausea and vomiting, followed by headache; during the next two weeks had

*Presented before the Clinico-Pathological Conference Jefferson County Medical Society.

headaches in various locations; only occasional nausea and vomiting; no fever; no delirium.

Physical Examination: General: Temperature 102. Was tall, well developed. Skin was rather dry, hot; heavily freckled; some loss of tone. Nails brittle; muscles were well developed. Hair fine, moderately heavy.

Nervous System: Appeared to be sleeping. (Had been given a hypodermic of morphine by family physician before leaving home). Could not be aroused, however, and no evidences of consciousness were elicited during the examination. Lay quietly in any position placed. Pupils were dilated, with no response to light; eye ground not studied. Abdominal reflexes absent; plantars present, but diminished, with no movement of the toes, the left nearly absent. Deep reflexes of forearm present; ulnars not elicited; right patellar present, about normal; left absent; ankle clonus left foot, none right. On doing a Kernig, the extension of the left leg after flexion of the thigh was more complete than the right, but neither definite.

Circulatory System: Capillary circulation was good; cervical pulsation normal. Heart was regular and rhythmic; a soft blow was heard over the mitral area.

Respiratory System: Respirations fairly deep, not audible, irregularly arrhythmic, and became perceptibly more so during the examination. The lips and finger nails a bit livid. When position was changed to side during examination the respiration became more labored and duskiness increased.

The bladder was not over-filled and no evidence of involuntary urination during the transportation was observed. A catheterized specimen was obtained.

Urinalysis; normal, other tests negative.

Blood Count: R. B. C. 4,910,000; W. B. C. 48,000; Hemoglobin, 100 per cent; Color index, 1.0 ; Polys, 91 per cent; Lymphs., 7 per cent; Endos., 2 per cent.

Spinal Puncture: Pressure 38 mm. Hg. Quackenstedt showed an increase of 8 points on left side; 2 points on right.

Cell Count: Lymphs. 79. Fluid clear. Direct smear and cultures negative.

By 1:30 P. M. there was definite increase in the lividity and the heart rate rose to 150. Thirty minutes later the heart rate was 186 and respirations scarcely detectable. Digifoline and Lobelline were given and artificial respiration begun. Oxygen and $CO_2$ were administered, the color improved, but only shallow, voluntary respirations were inaugurated. Death occurred at 4:15 P. M.

## DISCUSSION

**Stanley J. Simmons:** Before launching into an attempt to make a differential diagnosis in this case, let us briefly review the history for the purpose of emphasizing certain points.

We are confronted with a patient in profound shock, with a temperature of 102 F. and tachycardia, who has not been well for some five weeks previously, who had first suffered from pain and tenderness in the left foot and leg, which later cleared up and then switched over to the right leg, and this also cleared up. Then, two weeks prior to admission to the hospital he had a rather sudden onset of nausea, vomiting and headache which recurred at intervals until he came to the hospital. The significant physical findings are practically all confined to the central nervous system. He has a leucocytosis of 48,000 with 91 per cent polys; urine negative.

For the sake of being complete, let us consider some of the conditions which might produce coma, but which are fairly definitely ruled out in this case by the history and physical findings.

First, diabetic coma and uremia are ruled out by the history and urinalysis. Carbon-monoxid poisoning is ruled out by the history. The same is true of epilepsy. Drug poisoning should be considered because morphin was administered hypodermatically. However, this is ruled out by examination of the pupils, the presence of a leucocytosis and the history. Fracture of the skull might be considered but is also ruled out by the history.

It is evident from the leucocytosis and the elevation of temperature that we are dealing with an infectious process and, with the physical findings all confined to the nervous system, that it involves the central nervous system.

Let us consider what conditions might be responsible for this. First, meningitis; second, poliomyelitis; and third, encephalitis lethargica.

There are several types of meningitis. First, acute cerebro-spinal meningitis due to the meningococcus, ruled out in this case by examination of the spinal fluid which was clear, by the cell count and also by the history. Meningococcic meningitis has an acute onset, becomes fully developed in a few days and usually presents a striking picture of stiff neck, possibly opisthotonus, exaggerated reflexes, positive Kernig's sign, and the spinal fluid is cloudy, often almost pure pus. The cell count is exceedingly high and may run into several thousands with a predominance of polys, and the organism should be found on smear and culture.

Meningitis due to other pyogenic organisms, chiefly pneumococci, streptococci and staphylococci, also has an acute onset and usually becomes fully developed within a few days, although it may drag along for ten days or more before full development. There is usually a history of a recent attack of bronchial pneumonia, or some other infection of the upper respiratory tract, sinus disease, etc. Here also when the disease is fully developed the picture is very striking and similar to that seen in

epidemic cerebrospinal meningitis. Upon spinal puncture the fluid is purulent with a high cell count and a predominance of polys, and the organisms are recovered upon smear and culture.

Next, tuberculous meningitis. This disease attacks children chiefly, and while it may occur in persons of fifty or more, such instances are rare. In most instances it occurs before the age of ten; in fact, the largest percentage occurs before the age of three. There is almost invariably a history of tuberculosis in the family, and sometimes tuberculous foci can be demonstrated in the patient. The symptoms of this condition extend over a considerable period of time as a rule. Prodromal symptoms are quite prominent. Headache, elevation of temperature, irritability, loss of appetite, etc., may manifest themselves over a period of four weeks before the disease becomes fully developed, after which the signs are practically the same as in other forms of meningitis. There is a mild leucocytosis and the spinal fluid is practically clear. The cell count may run up to few hundred and is predominantly lymphocytic. Sometimes tubercle baccilli may be recovered by direct smear. The fluid is clear and there is a tendency to the formation of a coagulant sometimes described as "pine-tree," or "cob-web" in appearance.

I feel that meningitis of any form is fully ruled out in this case. We might consider meningismus. In such case there might be slight increased pressure, but the cell count is normal and the spinal fluid is clear. Furthermore, it is always secondary to a severe infection in some other part of the body.

Next, poliomyelitis. This condition is preceded by prodromal symptoms of short duration, usually four or five days. When the disease is fully developed there is febrile reaction of mild character, malaise, pains in the legs and sometimes in the back. Then comes the active stage in which paralysis develops and the fever usually subsides. Then the stationary stage, usually lasting about six weeks, followed by the stage of improvement which may continue for six months or longer. There is a mild leucocytosis and clear fluid is obtained upon spinal puncture. The cell count is normal and while there may be a slight increase in pressure, no organisms are recovered on smear and culture. It may assume the ascending form, involving the muscles of the chest and abdomen and that form is usually rapidly fatal. Or it may go on up and attack the motor nuclei of the brain cells and may reach as high as the ocular motor nuclei. This term is often spoken of as poliocephalitis. I feel that this condition is ruled out in this case by the history and the physical findings.

Lethargic encephalitis. This is a subacute infection and is preceded by prodromal symptoms which may continue over a period of several days. Outstanding features are lethargy, ophthalmoplegia and involvement of the central nervous system. It is rather significant that this case occurred at the same time as the recent epidemic in St. Louis, the symptoms of nausea and vomiting appearing on the same day that the first case was reported in St. Louis. The group of cases occurring in St. Louis described in the Journal of the A. M. A. were very similar to another group that occurred in Japan. They were characterized by demonstrable evidence of meningeal irritation in practically every instance. Eye symptoms were not very prominent. Paralysis of the eye muscles, strabismus and ptosis were noticeably absent. After reading the reports of those cases and comparing them with the case under discussion, a very close similarity is noted. Spinal fluid examination in those cases showed a high cell count with a predominance of lymphocytes, and a clear fluid from which no organisms were recovered.

I feel that this is a case of lethargic encephalitis, similar to those which occurred recently in St. Louis, and I expect to hear the pathologist report the finding of a diffused inflammatory process throughout the brain.

**L. Wallace Frank:** In considering this case several interesting questions present themselves.

First, whether or not there was any relationship between the pain and discoloration in the legs and the later nausea and vomiting. Second, the blood count showed 48,000 white cells, with 91 per cent polys, which would be rather high for encephalitis. Third, the Quackenstedt test showed an increase in pressure of 2 points on the right side and 8 points on the left. Fourth, the spinal fluid was clear and smear and culture were negative.

Like Dr. Simmons, I think the ordinary causes of coma can be excluded in this case. The patient had various nervous findings, some of which seem to indicate upper motor neuron involvement, while others point to lower motor neuron involvement.

The thought suggests itself that possibly this patient had a polio-meningocephalitis, or possibly a blood stream infection with multiple emboli. According to the history, there was no elevation of temperature, but we can take this more or less with a grain of salt. So many times the attending physician infers that because the temperature is normal at the time he takes it there is no elevation of temperature at any time. This patient might have had emboli into the vessels of the legs causing the pain and discoloration with subsequent re-establishment of circulation there and then emboli lodging into the cerebrum. However, I do not believe that emboli would produce a spinal fluid containing increased lymphocytes. While the pressure might be increased, I do not believe there would be any meningeal reaction or any increase of lymphocytes in the fluid. I conclude, therefore, that the condition began as a polio-encephalitis, causing the pain and discoloration in the legs. Many cases of

anterior poliomyelitis are never diagnosed as such because they do not develop paralysis. I know that such was true in the epidemic occurring in Philadelphia in 1912-13. Hundreds of cases were overlooked. They would run a temperature of 99½° or 100½° F. which, especially in children, was ascribed to some intestinal upset, and as paralysis did not follow they were not diagnosed as anterior poliomyelitis. And so with this patient, the condition may have started as a polio-encephalitis and later development of an inflammatory process in the central nervous system, with headache, nausea and vomiting and finally stupor and death.

I think the most likely diagnosis is polio-meningocephalitis.

**Franklin Jelsma:** This is an interesting but apparently rather complicated case. According to the history the patient was sick for a period of 48 days. That the initial trouble, reported when the patient was admitted to the hospital, was in any way connected with the terminal symptoms except vaguely, I doubt very much. In the beginning, one foot became red and painful and the patient limped. This cleared up and then the other foot became red and painful and the patient continued to limp. Then, two weeks before admission to the hospital he developed nausea and vomiting which, in the absence of any elevation of temperature, might well have been due to intracranial pressure of marked degree. When he entered the hospital he was in an advanced morbid state, being admitted at eleven o'clock and dying the same day at four-fifteen.

The neurological symptoms mentioned are of no particular value. He had ankle clonus on the left side and absence of abdominal reflexes. It would be interesting to know what the eye-grounds would have shown. I assume that the discs were choked. The spinal fluid pressure was 1300 mm. where as 110 to 120 is normal. The blood pressure was equally high, compensating for the increasing intracranial pressure. The next positive finding was the temperature, which might be significant. The spinal fluid was positive, containing 79 per cent lymphocytes. It would be interesting to know what the total protein was.

In view of the fact that there have been so many cases of encephalitis recently, this condition would have to be considered, as well as meningitis or meningocephalitis. Accurate diagnosis would be very difficult. I am wondering whether this individual did not have a tumor of long standing in the cerebrum, and whether the lymphocytes in the spinal fluid did not come from the tumor?

My guess would be an intracranial new growth or a lesion in the right cerebrum.

### Necropsy Report

**A. J. Miller:** External examination: Body is that of a well developed white boy in good state of nutrition. There is no rigor. Body is still warm. There are no discharges. No lesions are noted in the skin. Examination is limited to the brain. Incision is made between mastoid processes over the vertex and scalp reflected. Calvarium is removed by the usual circular incision and elevated posteriorly.

Meninges: The dura is tense. No lesions are noted in it. The cerebro-spinal fluid is very small in amount, so that after reflection of the dura, the subarachnoid space appears dry and there is no escape of cerebro-spinal fluid when the dura is incised. No lesions are noted in the meninges. Over the pons a small amount of fluid is noted when the brain is reflected and it is slightly blood tinged.

Brain: Brain seems large, that is within the upper limits of normal. The convolutions, especially of the cerebral hemisphere, are markedly flattened, so that the sulci are ironed out. The cortex seems injected. The sagital fissure deviates slightly to the left.

When the brain was removed, the cortex separated at about the junction of the right occipital and parietal lobes on the superior aspect. This rupture revealed a straw colored, gelatinous-like, tumor, estimated to be 6 cm. in diameter, in which recent hemorrhage had occurred. Most of the blood is clotted. The tumor has not broken into the ventricles. It does, however, present on the surface of the brain on the lateral aspect of the parietal lobe. The tumor is embedded chiefly in the corona radiata, but does involve the cortex slightly. No origin of the tumor is demonstrated other than the white matter, but from the gross appearance it seems that this was the origin. The tumor is very friable; the straw color apparently is due to degeneration and possibly products of secretion, since parts of the tumor are grayish pink in color. The yellowish portion is somewhat viscid, because of mucoid-like material.

The posterior limit of the tumor is about the mid-portion of the occipital lobe; its anterior limit is about 3 cms. from the parieto-occipital junction.

Microscopy: Sections of the tumor show it to be infiltrating the surrounding brain tissue. These infiltrations extend especially along the vessels. The tumor has a varied histology, that is, in some portions the cells are much more mature than they are in others and the more mature ones resemble early astrocytes. In areas in which differentiation is less complete, the cells are polygonal in shape, have no processes at all, or one or two short ones, but there are large areas in which intercellular substance is entirely lacking. In others it is abundant and resembles somewhat the felt-work of normal glial tissue. The nuclei are large, vacuolated and are round or oval in shape and contain numerous mitoses. Some of them are markedly vacuolated and the cytoplasm also of some of

the cells is markedly vacuolated, so that the cell is distorted and the nucleus often pushed to the periphery. It appears the tumor began in the corona radiata and has extended from there into the cortex.

Gross Findings: Glioma, involving right occipital and parietal lobes. Increased intra-cranial pressure.

Microscopic Findings: Astro-blastoma.

Summary: This patient's illness evidently began as a brain tumor in the right parietal lobe. It extended posteriorly to the occipital lobe, and extended peripherally into the cortex. It produced considerable intra-cranial pressure, by the fact that the bulk of tumor tissue added to the amount of substance in the cranial cavity. It is quite apparent that a very short time before death, that is, a day or two, there was hemorrhage into the tumor which markedly increased the intra-cranial pressure.

**Virgil E. Simpson,** (in closing) Reconstruction of the Case in the Light of Known Facts. The first recorded symptoms occured on July 6th with pain in the left leg and foot followed by a similar attack involving the right foot a few days later. From the history these two occurrences constituted the sum total of symptoms until August 7th just fourteen days before death. One might well ask, were these attacks in any way connected with the increased intracranial pressure. There was an increased pressure, as evidenced by the spinal puncture. The degree of pressure found ordinarily would have caused pressure symptoms. In very young children with unossified sutures the consequent separation of the sutures might explain absence of symptoms. One would have some hesitancy in offering such explanation in a boy of seventeen. In the adult there is only one direction in which the brain may expand under pressure and that is toward the foramen magnum. This tendency is limited to a degree by the tentorium cerebelli, but sufficient pressure may occlude the foramina of Magendie and Luschka. Again, if one or both lateral ventricles become distended there may result blocking of the foramen of Monro and sudden death follow. Many of the general symptoms of intracranial pressure are here absent,—mental disturbance, convulsions, paralysis, etc., are not listed in the symptomatology. While usually present in brain tumors with secondary hydrocephalus, they are neither necessary nor diagnostic.

It would seem that the intracranial pressure in this case resulted from three factors, (a) the growth of the tumor, which did not destroy an equivalent amount of brain tissue, hence, the cranial cavity content was increased; (b) as the tumor grew, pressing on the ventricles, it interfered with the free flow of the cerebral spinal fluid through the foramen of Monro quite likely, and through pressure on the narrow duct of Slyvius leading to the fourth ventricle as a further possibility. The intracranial pressure thus produced is, in effect, an internal hydrocephalus. This condition differs from that resulting from a basilar meningitis only in the site of obstruction; in meningitis there is obliteration of Luschka and Magendie foramina; (c) The cranial pressure may have been further increased by hemorrhages in the tumor. Hemorrhage in a glioma is quite common; it occurs in the substance of the growth and the thin walls of its blood vessels explain its frequent occurrence. The initial symptom of gliomal tumors may be due to hemorrhage and death may occur promptly following a large hemorrhage. It is possible that some deaths reported as cerebral hemorrhage may, in reality, be due to hemorrhage into the gliomal tumor. The likelihood of such a hemorrhage is increased by exercise or by a blow on the head. The foot and leg symptoms noted in July in this case may have resulted from such a hemorrhage. While there was no history of paralysis previous to the development of unconsciousness, there was an absence of patellar reflex in the left leg, with some ankle clonus; the pressure was almost equal on the two sides, as evidenced by the slight variation in the Quackenstedt. The pupils were dilated despite morphia given some two hours before admission. Contracted pupils are observed early in brain tumors usually, and may be succeeded by dilatation later.

Vomiting did not occur until two weeks before death. This was obviously a pressure symptom. The vomiting of brain tumors varies in severity and frequency with pressure; it appears to be more severe in subtentorial tumors, but in no event becomes projectile in the absence of very great pressure; it is not usually accompanied by nausea and pallor. There may be a vomiting center and it may be located in the bulb, since tumors there result in more serious vomiting than when occurring in other locations. Vomiting occurs in about one-third of all brain tumor cases.

The headaches in this case were not helpfully diagnostic, as they occurred in varying regions. The chief characteristic of brain tumor headaches is severity; it is often general and frequently not more severe in the tumor region than elsewhere; it may be continuous or intermittent and the duration of both phases is markedly variable. Being a pressure symptom, it is usually not an early manifestation. This holds true in the present case. If this patient could have been questioned closely, some cerebral discomfort might have been uncovered; ofttimes only a sense of fullness is described. Even had such a symptom been present, deduction as to localization of the tumor would have been properly guarded. If unilateral pain and tenderness were both in evidence, the finding would be more suggestive.

The leucocytosis may be explained, at least

in part, by the hemorrhages in the tumor. It might also be due in part to the terminal pyrexia. The hemorrhage in this case appeared to be from 24 to 48 hours old. It is not known how long the leucocyte increase obtained, as no laboratory studies had been done prior to admission to the hospital.

The high temperature is known to have been of short duration, as the attending physician reported he had not found the temperature elevated during the two weeks of his attendance. The temperature is thought to have been a terminal phenomenon. I have often observed it in other conditions, but it is especially common in cerebral pathology. The cause merits some comment. It has long been known that cord injuries cause marked variations of temperature. In some of these cases the temperature has been recorded as high as 111 F. or fall as low as 80 F. Such injuries result in a severance of nerve paths leading to the centers in the brain that regulate body temperature. The muscles become flaccid, skin circulation diminishes and sweat gland activity ceases. An animal with the cervical paths of the cord severed is influenced by external temperatures in much the same way as is a cold-blooded animal. The hyperpyrexia of such a condition is due to loss of thermic regulation, while in an infection the temperature rises because of a perverted heat regulation. Hence a febrile temperature is due to a lack of adjustment between the heat-producing and the heat-dissipating functions. It is now thought that the febrile temperature is due to an increased excitability of the heat centers, resulting in a regulation of body temperature at a new level. In the spinal cord lesion there is a loss of the heat dissipation function. In brain tumor there obtains an increased intracranial pressure which at a given point effectually cuts off the spinal cord paths and the body temperature rises.

I am interested in the location of this tumor. If it originated from the corona radiata, it is understood why general symptoms may have been absent, but a tumor so situated would seem to necessarily involve many fibres, hence a rather extensive paralysis should have obtained. A tumor in this region should cause extensive focal symptoms, since the connecting fibres between the cortex and the internal capsule would be damaged early. It would appear that if the tumor originated in the parietal lobe the clinical course would be more logically explained. A growth orginating in the ascending parietal convolution would involve only sensory phenomena. The thalamus is thought to register the sensations of touch, temperature, muscle and pain sense, while the sensory cortex receives and interprets them. Hence a lesion of this lobe does not abolish these primitive sensations. They are merely varied and fatigued. Inability to judge weight, determine shape or size or distance or texture would result. These minor changes could have obtained in this patient without being detected under the circumstances. If the growth had its origin in the superior parietal convolution, the stereognostic sense would have been impaired. And this, too, might easily have escaped detection before consciousness was lost. Had the the tumor originated in the remaining convolution of the parietal lobe, viz., the inferior convolution, there would have been no word blindness, since the patient was righthanded. There could have been some visual disability. Hemianopia has been reported, also diminution of visual acuity and contraction of the visual field of the opposite eye. These changes could easily have escaped detection in the clinical picture. Hence the parietal lobe as the origin of this tumor fits better into the clinical picture.

Finally, from the clinician's viewpoint it may be interesting to note:—

(a) That a glioma may remain inactive for long periods hence no symptoms.

(b) There may be few or no symptoms even during the tumor growth, because the tumor infiltrates the normal brain tissue without destroying it.

(c) That these tumors may attain considerable size without intracranial pressure symptoms occurring.

(d) That the first evidence of its presence may be a hemorrhage.

(e) That improvement and remissions in the clinical course are probably the result of repeated hemorrhages.

(f) That trauma or violent exercise may inaugurate a hemorrhage and become a medico-legal problem.

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**Paralysis of Hypoglossal Nerve in Sore Throat.**—Ulrich reviews twelve cases in which unilateral paralysis of the tongue developed in acute pharyngeal disturbances. The causal disorder was generally a severe sore throat with abscess formation or extensive swelling of the cervical glands. The hypoglossal paralysis was always unilateral and developed on the more severely affected side. The direct overlapping of an inflammatory process on the nerve seems to be the main factor in the development of the hypoglossal paralysis. The author also describes four cases of his own observation. In two instances microscopic examination revealed that the lesion of the hypoglossal nerve was due to periphlebitis of the jugular vein and of the posterior facial vein, respectively. The surgical observations in the third case and the clinical course of the fourth indicate the same mode of impairment.

# PLANS AND POLICIES OF THE STATE DEPARTMENT OF HEALTH*

ARTHUR T. McCORMACK, M. D.

State Health Commissioner, State Department of Health.

It gives me very great pleasure to come before members of the medical profession, who in reality constitute the Health Department of the State of Kentucky, and discuss plans and policies. It is particularly gratifying to be present tonight and to hear submitted to you by the City and County health authorities a proposal which embodies all that is best in modern public health practice. Under our plan of organization of the State Department of Health of Kentucky, the medical profession itself is the controlling body in all matters of policy. Every law on the statute books of Kentucky which has to do with the public health, except the act licensing chiropractors, was written or approved by the Kentucky State Medical Association through its regularly constituted officers. All is plain, specific and clear, and the result has been the development of a Health Department that is under the control of the medical profession at all time. This applies everywhere in the State except in cities of the first and second classes. In all other public health bodies throughout the State the selection, not only of its officers, but of its entire personnel, and the direction of its activities, is under the control of the county medical organization, and this, I believe, is as it should be.

We have some tremendous problems in Kentucky, necessarily tremendous because of the character of our government, and confusion exists in many of its units. We have a very poor educational system. We do not spend as much money for educational purposes as other States. Consequently our teachers are inadequately paid and they are selected on a basis which gives a trained teacher very little hope of continuity of service. This, together with a multiplicity of educational units, has resulted in keeping us almost at the bottom of the educational list. It is distressing to those of us familiar with the educational system in this State to see how few children above the fourth grade attend our rural schools during the three or four weeks in the summer time when they have the opportunity. Naturally, a population except for a small minority, which has not been educated beyond fourth-grade teachings, is one that is easily misled by the patent-medicine advertiser. Their superstitions have been preserved and they have not been taught those basic principles with which educated people everywhere are sufficiently familiar to enable them to distinguish between the true and the false. Consequently, they are easily swayed by demagogues in either politics or medicine. Under the Medical Practice Act the more flagrant forms of quackery have long been excluded from the State, but our people being unfamiliar with quackery in its more insidious forms are naturally a little chary about strict enforcement of the Medical Practice Act. That is not true in those sections of the State where competent officials are selected by honest methods, but in many sections of the State they are selected by special interests or by an electorate so partisan that the character and caliber of the candidate for office makes little or no difference. As a direct result of these deplorable conditions, Kentucky ranks third from the top in its death rate from diphtheria. The plans outlined by Dr. Simpson and others tonight for remedying this condition is the most heartening thing that has occurred in public health circles in Kentucky in a long time, and I hope that similar plans will soon be adopted uniformly throughout the State.

Two-thirds of the deaths from diphtheria in this State occur in children of pre-school age and these are, and will always be primarily the responsibility of the practicing physician, and when he has been brought to realize that the trend of today is the practice of preventive as well as curative medicine, and that every infant should be inoculated against diphtheria by the time it is nine months old, then and only then will our death rate from diphtheria be reduced. No matter how many child health conferences we may hold, how many circulars we distribute, nor how much educational work is carried on, until the practicing physician is willing to set up the proper machinery for immunization and to familiarize himself with modern methods, especially the Schick test, we will continue to have a high mortality rate from diphtheria. Merely injecting diphtheria toxin-antitoxin two or three times, or alum precipitated diphtheria toxoid once or twice, does not mean that permanent immunity has been established. At the end of two to six months, according to the product used, the Schick test should be done again. In private practice, in only 85 per cent of cases with diphtheria toxin-antitoxin and 95 per cent with precipitated diphtheria toxid, is complete immunity established, and the wholesale immunization of school children is never as satisfactory in its results as those obtained in private practice. The whole procedure, especially the reading of the Schick test, while comparatively simple, requires some experience. It has not been taught in the medical schools and many practicing physicians have never seen it done. Just recently a very intelligent man who came to Louisville from

*Read before the Jefferson County Medical Society,

another State, took his two young children to a doctor of large experience and told him he wanted them immunized against diphtheria, whereupon the doctor procured a thousand units of diphtheria antitoxin and proposed giving each child half of it as an immunizing injection.

This sort of thing is easy to laugh at, but the fact remains that immunizing methods have not been made clear and plain as have other techniques during the early education of the average practitioner. This has led to a demand on the part of the physicians of the State for conferences at which the procedure can be demonstrated and experiences interchanged.

In the same way and to the same degree the practicing physician is responsible for vaccination against smallpox which in this State is required by law on every infant by the time it is six months old. When done with proper technique (and it rarely is even in this day) it is one of the simplest and most effective surgical procedures we know anything about. It is distinctly a surgical procedure and should be carried out with the same exactitude and the same precautions as any other surgical procedure.

It may be interesting to relate how the compulsory vaccination law came into being. When Ephraim McDowell and Samuel Brown were in Edinburgh they heard of a man in the Northern part of England who had found a means of preventing smallpox, which in America at that time was a greater scourge than the Indians. Having no money for transportation, Brown walked down to see Jenner, who gave him a few threads impregnated with the vaccine virus and a couple of scabs. The problem then was how to get them safely to America, so Brown made a couple of balls of beeswax, cut them in two with a warm knife and scooped out little holes in the center in which he placed the threads and scabs, and walked back to Edinburgh. Six months later he sailed for Baltimore and thence made his way by canal and stage-coach back to Lexington, where he proceeded to vaccinate some five hundred persons, and at that time there were more vaccinated individuals in Kentucky between Lexington and Frankfort than in all the rest of the civilized world. A short time afterward there was an outbreak of smallpox among the Indians, and it was then that these five hundred immunized individuals proved to America that smallpox was a preventable disease. Then John Brown, Samuel's brother, and one of Kentucky's first United States Senators, came back from Washington and became Speaker in the House of Representatives of the Kentucky Legislature and in 1804 introduced in the House a compulsory vaccination bill which became a law and has been on our statute books since that time.

In the same way and to the same degree that smallpox and diphtheria are preventable diseases, scarlet fever is also a preventable disease. I think there is no question in the mind of any practitioner of medicine that scarlet fever gives rise to more disabling sequelae than any other disease of childhood. At the present time some sixty thousand children in Kentucky have been immunized against scarlet fever, thirty thousand by our Board in its experimental work and thirty thousand by the physicians of the State. It is of tremendous importance that those who would carry out the procedure for immunization against scarlet fever must first thoroughly familiarize themselves with the exact technique. In the enthusiasm of early days wholesale immunization brought disaster. Every step of the technique is important—the accuracy of the syringe, the kind of needle to be used, the sort of sterilization to be done, etc., etc. This has all been worked out to the nth degree, and no modifications of this technique can be made with successful results.

We still have too many cases of tuberculosis in Kentucky. One outstanding example of what can be accomplished by co-operation among practicing physicians occurred in Scott County. During the five years preceding the organization of the County Health Department, there were 39 deaths from tuberculosis in that County. During the five year period following the first five years of the development of the Health Department, the number of deaths was reduced to 17, and during the next five year period (after fifteen years of Health Department work) it was reduced to 11. During the past two years there have been seven deaths. This was accomplished entirely by co-operation among the practicing physicians in Scott County. They took care of their tuberculous patients in rudely constructed huts, the purchase of materials was financed by clubs of citizens, medical attention was given by the physicians, and nursing by nurses under their supervision. Expert diagnosis was, of course, necessary and this was furnished by the Board of tuberculosis. Every contact in the County was thoroughly examined, skin-tested and x-rayed, through the generosity of the physicians and citizens.

This is an outstanding example of what can be accomplished in the fields of preventive as well as curative medicine, bearing in mind that our responsibility is not alone to the patient we are called upon to treat, but also to the family of that patient. It is by the practice of preventive as well as curative medicine that we will accomplish the greatest purpose of our profession.

At the first meeting of the Kentucky State

Medical Association, in 1851, it was promulgated as a principle that the medical profession of the State of Kentucky, by reason of its training and experience, assumed responsibility for the health of the inhabitants of the State, and to this day it has adhered to that principle and shoulders the responsibility. In these difficult times we are apt to feel that because so many things are wrong, everything must be wrong, and yet my friends, tonight I think we who are members of our great profession can feel the utmost gratification in the fact that, while banks and railroads, corporations and governments, throughout this wide world, have toppled and fallen during the disastrous period through which we have passed, yet, for the first time in recorded history, there has been not only no increase but an actual decrease in the death rate of our people. By reason of our physical vigor, our moral fiber and our mental make-up, it is ours to guide the public aright along these lines, so that we as physicans, trained in our profession and fortified by experience, can go before the people of America insisting upon the righteousness of our cause and demanding that we and those associated with us be sustained and cared for, because we are essential to the preservation of civilization and life itself.

## PLANS AND POLICIES OF THE CITY HEALTH DEPARTMENT*

Hugh R. Leavell, M. D.

Director of Health, Louisville.

It is only with considerable trepidation, and after a great deal of thought, that one can assume the duties of directing the health measures of a city as large and important as Louisville. If there were not some definite hope of co-operation from the medical profession, the duties would be so arduous as to be practically impossible. However, it has been extremely gratifying to have so many offers of assistance from such a representative crosssection of the members of the County Society; and I wish to take this occasion to show my great appreciation for this attitude, and to assure the entire profession of my earnest desire to conduct the Health Department in a manner that will merit the co-operation which has been extended.

One of the first moves after taking office was the appointment of an Advisory Committee to assist in mapping out the general policies of the department in its relationships to the Medical and Dental Professions, and to the general public. This Committee is composed of medical and dental representatives, a public health worker, and a member of the general public. It really acts very much in the capacity of a Board of Health, in the absence of legal provision for such a Board in the local Department. In matters which will affect as many people as those coming under the supervision of the Department, it seems wise to have the assistance of such a Committee to avoid the errors that may crop up when decisions are made entirely by a single individual. Our plan is to have the meetings of this body at stated intervals, so that there may be a continuity of policy.

The rights and perogatives of the private practitioners of medicine and surgery must be constantly in the mind of those determining the policies of preventive medicine. No public official can hope to have the intimate relationship that so often exists between the family doctor and his patients; nor can the importance of the confidence of the patient in his physician's judgement and advice be over-emphasized. It is my firm conviction that those who have attributed a selfish motive to the physician who did not always stress the value of preventive medicine have been misled. But there are reasons for thinking that in the stress and worry of an active practice, the doctor may have failed to keep up with some of the newer practices of prophylaxis; and that ethical considerations may have kept him from offering to patients some of the valuable measures which he was prepared to administer and advise. Surely, one of the major functions of the Health Department is to do all in its power to call newer methods to the attention of the practitioners, so that they may be prepared to inspire the thorough confidence of those patients that should come to them as a result of the generalized educational work of the public agency. And the paramount importance of such educational work should be among the first considerations of Health work.

The day when the health officer was a particularly powerful variety of policemen has passed. And even the value of mass sanitation, such as water control and sewage disposal, is overshadowed by the results accruing from measures directed toward the immunization and hygienic living of the individual. Fortunately for the concept of American freedom, there are relatively few laws that compel an individual to so protect himself. It is much more desirable to have such steps come as a conscious effort on his own part. But this does mean that a considerable amount of money and energy must be expended to create and direct these conscious efforts. And this entails a much greater budgetary provision for education work on the part of the public agencies. With the limited funds available, it will be especially necessary to restrict the

*Read before the Jefferson County Medical Society.

work of the Department to the care of those who are unable to pay their private physicians either on a full pay or a part pay basis. We expect to make every effort to discover abuses of the free service on the part of those wholly or partially able to pay their own way.

Another function which the Department of Health may perform more advantageously than the private practitioner is that of investigation. With the mass of data which he and his staff should be able to compile, trends may be pointed out and valuable conclusions drawn. Even this involves the co-operation of the local physicians, particularly in the careful and conscientious reporting of contagious disease and in submitting records of immunizations given, so that the value of such procedures in the mass may be ascertained. While no untried public health measures should be promiscuously used, even for experimental purposes, the department should be in the vanguard of progress in the application of promising procedures and in the evaluation of results obtained through their use. For purposes of information we are planning to Schick test all the children who have this year received the single injection of alum precipitated. diphtheria toxoid. If this simple method of immunization is found effective it will be of tremendous value.

We feel that the examination of the school children offers a fruitful field for the application of educational work. Any physical examinations done should be made not with the idea of submitting impressive figures in the annual report, but with the definite aim of convincing the child of the value of such an examination. No attempt will be made to examine every child annually, but each examination will be made with the child stripped to the waist, and will be sufficiently thorough to be convincing. Every effort will be made to have the parents of the child present at the time the examination is made, and the attention of the nurse will be devoted to instructions in securing professional care in the correction of defects discovered, and in follow-up work to encourage the consultation of physician and dentist. It seems reasonable that the success of this work should be graded not on the percentage of defects corrected, but on the number of children with defects who consulted their doctor.

With the funds available, it has been possible to merely scrape the surface in providing dental care for even the definitely indigent children. Such care as has been given has been almost entirely of an emergency nature. Our present plan is to continue to provide a certain amount of such emergency care, but in addition, and of much greater importance, to have one team give its entire time to making a survey of the oral conditions of the school children so that we may have a more accurate knowledge of the problem which faces us. Of course, the results of this examination will be passed on to the family dentist, with general, and not specific recommendations.

As a result of careful study and consideration of the problem, it has seemed wise to consolidate the City Hall laboratory with that in the City Hospital. This will certainly reduce the overhead cost of laboratory work, and should increase its efficiency as supervision will be simplified, and economy in operation will make possible a more highly trained type of supervision. Material for study by the medical students will be more readily available. An additional factor of no little importance will be the amount of time saved in bringing specimens to the laboratory by field workers, due to better parking facilities at the hospital.

Another consolidation is under way, combining the departments inspecting Food, Sanitary conditions and Milk under one general head. This will do away to a considerable extent with overlapping districts, and will make each inspector definitely responsible for the sanitary conditions in his particular district. Instead of exhibiting pride at the number of sanitary complaints he has answered, he will be humiliated by an unduly large number of such complaints. We do not plan any radical changes in the Milk subdivision, as it has done such excellent work as to be frequently cited nationally as an outstanding example of what such an organization should be.

In conclusion, it seems fair to say that we plan no revolutionary changes, but we do hope to gradually work out an organization and a general policy that will fit Louisville's needs better than any other plan would. And it seems not unreasonable to hope for the support, advice and assistance of the local profession.

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**Action of Injectable Liver Extracts on Blood.**—in nineteen patients with pernicious and secondary anemia, or with disease of the liver or of the biliary passages and in persons without clinically demonstrable changes of the blood-forming apparatus and of the liver, Gebbardt and Klein observed that parenteral administration of liver extracts was always followed by a noticeable increase of the cholesterol and of the cholesterol ester contents of the serum. The cholesterol values were determined partly by gravimetry and partly by colorimetry. As far as the influence on cholestrol is concerned, injectable liver preparations do not differ from fresh liver or from enterally administrated liver extracts. The authors consider a hormonal modification of the

# PLANS AND POLICIES OF THE JEFFERSON COUNTY HEALTH DEPARTMENT*

JOHN D. TRAWICK, M. D.

Jefferson County Health Officer.

It is a great pleasure to address you tonight and to tell you of some of the difficulties with which we have been confronted in entering the work of the County Health Office, and to acknowledge the splendid co-operation coming from the Society.

I entered upon my new duties with a certain amount of discouragement mingled with fear that I would not be able to measure up to all the requirements that seemed to be needed to do this job. I wish very gratefully to acknowledge the splendid co-operation of my colleague, the Director of Health of the City. We have attended each other's board meetings and have sat together in conference with mutual benefit and with a readier understanding of each other's problems than could possibly have been attained without this contact.

Also, permit me to acknowledge in this company the fine backing of the officials of the State Board of Health. With these two groups in the city and the state behind us in the organization efforts of the County Health work we were much more quickly able to visualize our problem than would have been otherwise possible.

Under the new order our work is two-fold. In the field of preventive medicine we are going to be enormously assisted by the step you have taken tonight which I am frank to say is one of the most forward-looking, progressive things the Jefferson County Medical has done. The second phase of our work is the medical relief. When the newly elected Director of Welfare of the County came into office he asked for conferences with members of the Fiscal Court and the County Health Department and placed before them recommendations that the health measures heretofore handled by the Welfare Department be transferred to the Health Department of the County. His suggestion was approved and with the action of the Fiscal Court transferring the budget for health heretofore included in the Welfare Department budget, the Health Department of the County found itself with a program of work that was not only more than double the work of our predecessors, but one which called for the expenditure of more than double the amount of money previously allocated to the Health budget. In the field of preventative medicine the County Health Office found itself responsible for the school children in some sixty odd schools, ten or fifteen colored schools, and some eight or ten parochial schools,—a school population of from ten to twelve thousand children. These figures are approximate.

In addition to the preventative problem thus presented was the task of furnishing health relief to a county population estimated at from fifty to sixty thousand people. When it is realized that a fairly large percentage of this population comes under the classification of the "absolutely unable to pay anything" either for drugs or hospitalization you can begin to appreciate something of what our problem is. When Dr. Leavell referred to his scanty budget I felt quite a responsive sympathy particularly since I have to realize that the Fiscal Court cannot permit more than half of the allocation given under the old Welfare plan for hospitalization and medical relief. The County Health Office immediately enlisted the co-operation of a group of doctors in the county and a few in the city outskirts to study the problem with the Health Officer. Likewise we have enlisted the aid of the private hospitals in the city and are able to report tonight that county patients are being hospitalized in the hospitals of the city, at definite agreed rates paid for out of the County budget.

The County Health Office takes pleasure in recognizing and presenting to you tonight its board, Dr. J. Dury Hancock, Chairman, Dr. J. B. Lukins, Dr. Lee Palmer, Dr. Alice N. Pickett, all of whom are present. Judge Ben F. Ewing, County Judge, is the fifth member of the board. Gentlemen of the County Society, it is a pleasure to work with a board of such high type. They have instructed me to proceed with the task on the trial and error plan. We realize that we will make mistakes, but we hope you will bear with us. Until the Welfare Department gets actually well into organization the County Health Department is going to give aid to families which, in your opinion may not be entirely indigent because we have no facilities in the Health Department for adequate social service investigations but must rely upon the information obtained for the time being through the county health nurses, the school teachers, the P. T. A., and the church groups. When the Welfare Department becomes definitely organized of course all this investigative work will be done under the Welfare Department and no cases will be helped by the Health Department but that will have definite recommendations as to indigency from the Welfare Department.

In the expression which we have received from you gentlemen of the Jefferson County

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Medical tonight we catch a note of very fine encouragement and as for the County Health Office we are determined to consider your vote tonight as one of confidence and sincerity and we propose to count upon your co-operation.

### DICUSSION

**John F. Boggess:** All of the speakers have borne witness to such remarkable co-operation that the citizens of this city, county and state should congratulate themselves. In fact, it is so complete as to suggest a knowledge of Elbert Hubbard's definition of co-operation which was, "doing what you are told to do and doing it damned quick."

I am not experienced in either city, county or state health work except from a remote distance, but it appears to me that the subject of public health is not limited to the city, county and state; that a few remarks concerning the relationship of the Federal Government to public health matters might be pertinent.

In England there is no written constitution; everything is handed down by precedent from generation to generation, but still they get things done. A similar situation exists in our government regarding public health measures. There is nothing in our Constitution bearing directly upon public health work. The activities of the U. S. Public Health Service is based upon an article in our Constitution which reserves to the Federal Government the right to regulate interstate commerce, and the courts have so far uniformly held that any form of interstate traffic which may result in the transmission of communicable diseases comes within Federal jurisdiction. For example, the drinking water with which common carriers in interstate traffic are supplied is capable of transmitting disease, and you have the assurance when you get on a train or a boat or any vehicle engaged in interstate traffic that the drinking water is safe. It is illegal for any interstate carrier to supply water obtained from any source not approved by the U. S. Public Health Service, and that approval is given only after the source has been carefully investigated and the water subjected to bacteriological examination.

Another instance. A few years ago there was an epidemic of typhoid fever in Chicago which was traced to "boot-legged" oysters. It is illegal for oysters to be transported in interstate traffic and offered for sale which have been obtained from fields which have not been examined and approved by sanitary engineers and bacteriologists of the Public Health Service. It was proved that the epidemic in Chicago was directly tracable to oysters taken from beds which had not been so approved. Many similar instances might be cited if time permitted.

## ELEPHANTIASIS, CASE REPORT*

D. P. Hall, M. D., F. A. C. S.

Louisville.

Surgical literature in the United States relative to Elephantiasis, contains several reports of Barbados Leg and Elephantiasis of both lower limbs; however, reports of Elephantiasis affecting both limbs, the scrotum and penis in the same individual, are few—none being reported in the Ohio Valley.

Elephantiasis is characterized by an hypertrophy of the dermis and subcutaneous tissues which may occur as a result of long standing lymphatic obstruction. The condition may affect the limbs, inguinal regions, scrotum, penis, spermatic cord or vulva and in some cases the breasts and arms, or following radical amputation of the breasts and as a continuous process from lymphedema.

Prior to 1892, the Filariae were thought to be the only obstructive factors in the production of Elephantiasis. This was shown to be false by Sebouraud, who reported five cases in which he was successful in demonstrating pure cultures of streptococcus recovered from the blood and serum of patients affected with Elephantiasis. Dr. Rudolph Matas, in his pioneer work of 1913, contributed much to further the belief that repeated bacterial invasion may be responsible for the condition. In a personal communication in May, 1933, Dr. Matas, commenting on the case to be reported, gave the opinion that the possible causation was the invasion of a streptococcic infection low in virulency which produced an hyperplasia of the lymphatic and venous structures in the inguinal regions. Repeated invasion of a bacterial nature might account for the periodic rise in temperature followed by chills and vomiting.

The late Dr. W. E. Sistrunk gave us an excellent pathological description of Elephantiasis, describing the condition as one of hypertrophy in the connective tissue elements of the skin and subcutaneous tissues, including the aponeurosis, recognizing that it is a continuous process from a primary infectious lymphedema, in which the epithelial layer of skin becomes thinned attributable to collections of lymph between the skin and aponeurosis.

The symptoms accompanying elephantoid swelling compromise a triad; that is, fever usually 103 to 105° F., erythema of affected part, and chills. This triad of symptoms recur at six week intervals in a great number of cases.

The tissues involved in the elephantoid

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change, impress one with the progressive increase in size and thickness following each periodic attack of so-called "Elephantoid Fever."

The treatment fortunately has been much modified since the intrepid surgeon, John Murray Carnochan of Savannah, Georgia, in 1851 ligated the femoral artery to starve a Barbados Leg. (It might be recalled of this gentlemen that he was the first in America to excise the superior maxillary nerve, including Meckel's ganglion for facial neuralgia in 1858; resection of ulna in 1853; of radius in 1854 and os calcis in 1857.) Professor Buchanan, in 1867, reported a case seven months after operation in which he ligated the external iliac for the cure of an elephantoid leg, with a satisfactory result.

Handley, in 1908, described his method of lymphangioplasty for chronic obstructive lymphangiectasis, recommending its use in elephantoid conditions elsewhere, the objective being the artificial drainage of lymph-blocked connective tissue, through the medium of sterilized silk strands introduced subcutaneously through connective tissue planes. This procedure has been used with varying degrees of success in limited areas of lymphatic edema.

The surgical procedure offering prospect of success, must depend not on artificial drainage but the establishment of a deep collateral lymphatic circulation, which the Lanz, Kondoleon, or Sistrunk operation theoretically and practically accomplishes. Excision of large masses of elephantoid tissue must of necessity be resorted to in many cases, as in the scrotum and penis, to permit of communication between superficial and deep lymphatics in the inguinal region.

Preservation of function and a cosmetic result, are of prime importance.

J. V. A native of Indiana, age thirty-one years, white, unmarried male, employed on a farm. Entered Norton Memorial Infirmary May 4, 1933, for relief of an enormously swollen scrotum, penis, and lower extremities.

Patient's present illness began in 1915, at which time he was aware of a small swelling on right ankle that gradually ascended the right limb. The part was not painful but became cumbersome. During 1917, the patient observed a swelling of left ankle which traveled upward until left limb became the size of right. The time elapsing from appearance of swelling to present enlargement was in each instance a year.. Shortly after the primary swelling, there appeared patches of fiery-red spots, at which time he would be siezed with a chill, followed by fever and at times vomiting. This attack would last from three to four days, after which the spots would disappear and fever recede. The attacks have occurred at intervals of six to eight weeks. During 1918, the scrotum and penis became involved. First the scrotum became enormously enlarged, after about one year reaching the level of his knees. The penis shared in this general enlargement of the external genitalia, assuming a peculiar "serpent-shape." The foreskin became greatly overgrown and retained urine after urination.



Front View

Walking has been impeded because of the scrotum, which he has been forced to carry in a sling. He had to change his mode of dress from trousers to robe, or skirt, in order to insure comfort.

Some headaches have been experienced, lasting for a day or so at a time, but relieved by the usual home remedies. Two or three times during the past year attacks of vertigo have occurred, not accompanied with faintness or jaundice. Six months past he contracted acute bronchitis, which he thought was followed by asthma. For a few nights, difficulty in breathing was experienced. Tachycardia has been present when walking for short distance but no dyspnoea.

The appetite has been normal and no distress has followed meals. Vomiting has occurred, but only during attacks associated with chills, fever and redness of legs.

Bowel habits are regular, with no constipa-



Side View

tion, diarrhea or bleeding.

Urinary frequency or nocturia, have not troubled him but there has been "dribbling" of retained urine, after micturition, which is spilled from under prepuce.

Previous to the present illness, patient's general health had been excellent. He denies any venereal infection. Had the usual diseases of childhood, without complications. Had one attack of acute tonsillitis when a child.

Social habits have been those of the average farmer. The use of tobacco was begun when quite young, and he thinks he uses it to excess.

No history of sexual abuse, is obtainable.

Patient's father is seventy-five years of age, living and well. He has two living brothers and two living sisters, all of whom enjoy good health. He cannot recall any immediate or distant relative having had a condition similar to his present affliction.

Patient is a well-nourished male of about thirty-five years of age. Weight is 160-lbs. Pulse 80. Temperature 99° F. Respiration 20. Blood pressure 130/88. Cheeks flushed. No eruptions or pigmentations discernible.

There is an immense swelling of limbs, scrotum and penis.

The hair is rather coarse and somewhat shaggy. Face has a red flush with some capillaries very prominent. The eyes present no exophthalmos or deformities; pupils react to light and accommodation. Breath is rather foul. Teeth present advanced dental caries accompanied by pyorrhea alveolaris. Tongue has a thick, white coat. Tonsils are hypertrophied, with reddening of pillars and pharynx.

There is no interference with mobility of the neck; thyroid and glands of the neck are not enlarged. No tracheal tug ascertained.

Thorax is symmetrical; there is exaggerated flattening over sternum; respirations are free and equal; no rales, impaired resonance or pleural friction elicited. Heart is slightly enlarged to the left; soft systolic murmur heard at apex and in aortic area.

The abdomen is flat, free from scars and varicosities; no hernial masses; there is absence of any tenderness or rigidity. Liver, one-finger's breadth below costal margin. Spleen not palpable. No fluid noted on percussion.

The scrotum is enlarged, reaching to the knees; skin is very thick; does not pit on pressure; a few verrucae are present; light is not transmitted; circumference is 67-cm. Penis 26-cm. in length, circumference 18-cm.; skin thick, coarse and dry. Prepuce edematous and cannot be retracted to bring glans penis in view. Presents a "serpent-shape," due to subcutaneous contracture.

Both right and left lower extremities



Rear View

greatly enlarged, giving appearence of elephant legs. Skin, brawny, no redness, tenderness or varicosities. Measurements, circumference: thighs 60-cm.; knees 47-cm.; calves 55-cm.; ankles 37-cm. The following laboratory reports were made by Dr. C. M. McNeill.

Urinalysis: Appearance cloudy; reaction acid; specific gravity 1021; albumin, trace; sugar negative; acetone negative; diacetic acid negative; bile negative; urobilin negative; microscopic, numerous triple and amorphous phosphate crystals; pus cells occasional; red cells per cmm., 122.

Blood: R. B. C. 4,100,000. Hemoglobin 73.3 per cent. Hemoglobin grams 11. Color index .9. W. B. C. 6600. Neutrophiles 68 per cent. Eosinophiles 1. Basophiles 0. Monocytes 10. Lymphocytes 23. Metamyleocytes 0. Myelocytes 0. Anisocytosis slight. Megolocytes a few. Hypochromia slight. Platelets slight increase. Malaria negative. Blood culture negative. The blood picture is normal except for a slight secondary anemia. Several preparations were examined at 10 P. M. and 2 P. M. respectively, for Filariae Bancrofti, but none were found. The concentration method of Todd and Sanford, used. No Filariae in urine.

Hanging drop of blood at 8 P. M. and 2 A. M. No Filariae found. Repeated at 2 A. M. No Filariae found.

Wassermann negative.

Basal metabolic rate, Plus 16.

Fluoroscopic examination of the chest showed no evidence of any gross abnormality.

A film of the abdomen shows nothing suggesting urinary tract stones or gall stones. The bones of the spine and pelvis are normal.

A film of the pelvis was made. It shows an enormously enlarged scrotum. The thighs are also tremendously enlarged. This is entirely limited to the soft tissues. The bones seem to be normal.

Gastro Intestinal Examination Barium Meal: The esophagus was normal. The stomach was normal in size, tone and position. The outline was regular. There was no evidence of an ulcer or other abnormalities. All portions of the duodenum were normal.

Six-Hour Examination: The stomach was empty and the head of the barium column was at the hepatic flexure.

Films: Show a regular gastric contour and quite a well-filled duodenal bulb.

24-Hour Examination: The small bowel was empty and barium was scattered quite regularly throughout the course of the colon.

Summary: The examination of this gastro-intestinal tract was essentially negative. The finding of interest was the enormous enlargement of the scrotum and the soft tissues of the thighs.

Patient requested the scrotum and penis be first considered for operative treatment, since they proved more hindrance to locomotion.

The scrotum was amputated under spinal anesthesia, the Knott, shield-shape incision was used, which was extended around base of scrotum into normal tissue. The skin and subcutaneous tissues were very much hypertrophied—about one-half inch in thickness. Numerous vessels were severed, which added materially to the difficulty of the operation. Chylous fluid was found distending left tunica vaginalis, which when incised liberated one-quart of fluid. The redundant tunica was excised and remaining portion sutured posterior to left testicle with No. o-chromic-cat-gut. Both testicles were grossly normal, and were preserved. Testicles and cords were covered with remaining tissue by using interrupted dermal sutures. A gauze drain was inserted in the lower angle of incision. The first-stage operation was concluded by making an incision of the prepuce to prevent retention of urine between the glans penis and prepuce. The pathology report was made by Dr. A. J. Miller.

Gross Description: Specimen consists of mass of tissue measuring 21 x 18 x 5-cm Outer surface is covered with skin. The skin is very irregular and somewhat papillary. There are no ulcers present on outer surface. Interior of specimen consists of a gray, rather fibrous tissue which is quite edematous. There is no line of demarcation between the skin and tissue making up the bulk of the specimen. The majority of the specimen is quite homogenous in structure, gray in color and appears fibrous.

Microscopy: Sections of the skin show the papillary appearance which was mentioned grossly to be the result of hyperplasia of the corium forming small nodules which pushed up the epithelium. For the most part, however, the epithelium has fewer papillae than normal. In a few localized areas they are hyperplastic. The cells are smaller than usual, that is they seem to have less cytoplasm in proportion to the nuclei. The corium is somewhat edematous, but is markedly thickened by proliferation of the connective tissue. The dartos is extremely hypertrophic; muscle cells are large, forming large bundles of muscle which are spread apart by an excessive growth of connective tissue between them. There are many enormously dilated lymphatics, the endothelial cells of which are hypertrophic. About the lymphatics and also small blood vessels there are localized collections of cells many of which are plasma cells. There are also many lymphocytes and a few monocytes. Polymorphonuclears are practically

absent. About the vessels there is also growth of connective tissue. In some of the sections taken from the deeper portion of the specimen there is much granulation tissue which is infiltrated with cells the same type as those about the vessels. This is especially marked in sections taken from deeper portions of the specimen. There are a few large vessels which are markedly thickened by growth of the connective tissue both in the intima and in the muscle coats. The muscle cells are hypertrophic. This resembles very much the arteritis occurring in the frost bite. The sweat glands are atrophic, surrounded by small numbers of infiltrating cells.

Diagnosis: Elephantiasis of the Scrotum.

Convalescence was uneventful. The remaining scrotum has become reduced since operation, due to deep and superficial lymphatic communication having been established.

A later report will be made after first and second Sistrunk-Kondoleon operations on legs have been accomplished.

## DISCUSSION

**Irvin Abell, Louisville:** As indicated in the preamble to this report the vast majority of instances of elephantiasis reported in this country are of the inflammatory type. This is particularly true if we exclude the rather huge enlargement due to lymphatic obstruction as a result of operative trauma or neoplastic growth. The obstruction in the inflammatory type is as indicated by the essayist due to bacterial invasion with secondary changes in the lymph channels producing closure or diminution of calibre.

Dr Hall has kindly consented to a brief report of our experience with elephantiasis which has been limited to the lower extremities. We have seen four cases all in women, in three being limited to one leg, and in one involving both legs.

Case 1. Female, age 35, married, multipara, three living children, two dead at birth. In her history patient stated that she was born with birth marks on her left leg and that at the age of eight the leg became enlarged, later attaining such size as to interfere with its function. It had on several occasions opened and discharged a milky fluid of rather foul odor. At the time she came under observation the leg was enormously enlarged from the toes to the body—there being at the time no open wound on it. The visible and palpable blood vessels were all enormously dilated. In view of this latter finding palliative operation was considered inadvisable. A hip joint amputation was done. I saw her five years later at which time she had a lymph-hemangioma in the lower abdominal quadrant approximately 3 x 4 inches in size. Since this was giving no particular discomfort it was not subjected to treatment. A later report indicated that it had not increased in size and



Case No. I.

was without symptoms other than the knowledge of its presence.

Case 2. Female, age 35, mother of three children. Enlargement of leg was noted nine years previous and had increased until its size mechanically prevented walking, it being approximately twice the size of the second leg. A Kondoleon operation was done, removing strips of skin, subcutaneous fat and fascia from both inner and outer surfaces of leg and thigh. The result, while not perfect, was a decided improvement, the patient being able to resume her household duties. I saw her two years later, at which time there was still some swelling in the leg but this was fairly well controlled by bandaging.

Case 3. Female, nullipara, age 35, with a history of slight deformity in foot since birth. In recent years the leg had gradually increased in size, the enlargement being chiefly below the knee. A Kondoleon operation was done with rather disappointing results. While the size of the leg diminished the discomfort continued.

Case 4. Female, nullipara, age 51, with rather huge enlargement of both legs below the knee of eight years duration. A Kondoleon operation was done on both legs with most satisfactory results. There has been no recurrence of swelling and patient is able to walk and be on her feet without discomfort.



Case No. II.

Of the three Kondoleon operations, one has been entirely satisfactory; one has resulted in marked improvement, patient being able to resume her ordinary duties, and one has resulted in failure.

**L. Wallace Frank:** As pointed out by Dr. Abell, this condition is apparently much more common in the lower extremities, showing that stasis probably plays a definite part in its causation.

I have under observation at the present time a patient with a condition which I was fairly certain was true elephantiasis, and which had been coming on gradually for about three years. When we did a Kondoleon on the inner side of the leg we also took out some glands for pathological examination, and we are now inclined to believe that the condition is a malignancy with secondary lymph stasis, but we are not yet certain of that.

As to the causation of elephantiasis, there is some difference of opinion as to whether lymphangioma, lymph stasis or infection is the chief etiological factor. I believe the weight of opinion is that infection is the predominant causative factor.

We frequently see so-called surgical elephantiasis, particularly following radical breast operations, but here there is not the thickening and induration of the skin seen in true elephantiasis.

I think the part the filariae play in the causation of this disease is that they block the lymphatics, causing lymph stasis and infection occurs secondarily.

The ancients ostracized individuals afflicted with elephantiasis which, in those days, was not differentiated from leprosy. Some African tribes treated individuals suffering from elephantiasis as saints, believing them to have been favored by the Gods with extraordinarily large parts.

The Kondoleon operation has hardly come up to expectations in the way of curing these patients. Kondoleon himself, in reviewing his results in 1924, said that of twenty cases operated upon, four showed good results, five were improved, and the remainder were unimproved. A possible explanation of this is that these patients have what might be called a chronic type of erysipelas, and so long as the infection remains in the skin the disease is bound to recur. Many of these patients are now given anti-streptococcic serum in addition to surgery. There is no question that internal medication plays an important part in the treatment of elephantiasis.

In scrotal elephantiasis some remarkably good results have been obtained. In an article published in the British Medical Journal about two years ago there was a report of a number of cases. The operation was somewhat more radical than the one usually employed in that the skin of the penis was cut in a manner to have an elongated prepuce which is folded back, thus providing a new covering for the organ and eliminating the serpentine effect seen in Dr. Hall's case.

**D. P. Hall,** (in closing:) I think it has been pretty well proven that most cases of elephantiasis, even those occurring as a result of filariae, show a low-grade streptococcic infection.

I had the pleasure of seeing the late Sir R. P. Rowlands operate on two elephantoid legs in Guy's Hospital in London, several years ago, the patients being Englishmen who had been in the British Colonial Service. They have more cases of elephantiasis there than we have. Dr. Matas of New Orleans has probably operated on more cases of elephantiasis in the United States than any one else.

The conservative treatment of elephantiasis dates back to 1911, when Lanz of Germany, brought out his operation consisting of making an incision down the side of the leg and excising the excess tissue, which did not prove successful. Then came the Kondoleon operation and in 1915 Dr. Sistrunk modified the Kondoleon operation, which has been successful in curing many of these cases. However, there still remains a lot to be hoped for in dealing with this condition.

# MORE COMMON GASTRO-INTESTINAL SYMPTOMS OR DISEASES RESULTING FROM FOCAL INFECTION*

Frank M. Stites, Jr., M. D.

Louisville.

There has always been a great manifestation of interest in the study of diseases of the digestive tract and early medicine made special study of these diseases because of their relative frequency. Resulting from the intensive study of these conditions was the important subdivision of medicine, known as Gastro-Enterology, today recognized as one of the specialties. But because of the gastro-intestinal symptomalogy of such a wide variety of diseases it behooves one attempting to do special work in this line to be thoroughly versed in internal medicine and diagnosis or his experience may be a very disappointing one.

Manifestations both acute and chronic that are secondary to local infection may be inflammatory, due to bacterial invasion or they may be functional due to the effects of endotoxins. So organic diseases, caused either by the hematogenous or lymphagenous invasion of the tissues by micro-organisms from focal infections may be acute or chronic. The degree of involvement depends on the virulence of the organism and the amount of infection carried to the organ. If only a limited area is involved the resulting damage may be slight and permanent impairment be of no consequence. If the virulence of the organism is low, the resulting bodily manifestation is correspondingly less evident. If the foci is a chronic one and the resulting damage to the organ or organs is intermittent, so the manifestations will be, but ultimately enough damage results to give serious pathological lesions.

This subject opens a wide field unless there is some modification and at the beginning, two statements should be made, first that no matter what the etiological organism may be in a given lesion, the mechanism of secondary infection is probably the same, and secondly that the subject of probable elective tissue affinity be given due consideration. It is also my desire to impress upon you that certain lesions may be apparently insignificant or even benign, but consideration of them, when signs or symptoms are absent or of little consequence, is the better policy.

In a subject of such wide scope before a meeting of this type there must be some limitation and I have chosen the more salient phases as we see them in my practice as an Internist and Gastro-enterologist.

Acute Appendicitis: This disease only recognized comparatively recently was first brought into prominence by American workers. The first case reported by Walcott Richards of Cincinnati in 1837 and then in 1838 a similar case by Dr. Edward Hollowell of Philadelphia. Our literature only contains four cases in the next quarter century and in the late fifties Dr. George Lewis of New York published a paper reviewing forty-seven cases. Most of the work on this condition has been done by Americans and it is a credit to our early workers who were pioneers in this field.

The focal origin of this disease is supported by an abundance of clinical and experimental work but there is considerable variance of opinion regarding the hematogenous invasion of organisms from foci and the possibility of local stasis, foreign bodies and involutional changes as possible causes. Such authorities as Kratz, Canon, Adrian, many French authorities and more recently Rosenow consider acute appendicitis the result of bacteremia, having its origin in foci of infection. The similarity between the tonsillar tissue and that of the appendix is stressed by Adrian. The cultural similarity of organisms from such regions as tonsils, apical infections about the teeth and upper respiratory organs to those from infected appendices is very striking and the virulence of the organism is in contrast to the type of appendicitis. Of equal importance but undoubtedly of less severity is the appendicitis arising in the organ itself from organism normally inhabiting it and increasing in activity from lowered resistance due to kinking, foreign bodies and other involutional changes. Mild appendicitis due to organisms of low virulence may disappear or the infection may become latent but if the original foci persists it may be a future source of bacteremia with recurrent attacks and a tendency to chronicity or the so-called chronic appendicitis.

A brief summary of the symptoms readily shows why so many of these cases fall into the hands of the general practitioner, the internist or the gastro-enterologist. Usually first is pain in the epigastrium or some less common location as in the groin or upper, outer right quadrant and back depending on the location of the appendix. Occasionally on the left side. The severity often determines into whose hand these cases fall, for frequently in modern times the more severe pains cause the patient to see a surgeon but the chronic case with discomfort and little or no pain is usually the problem of some one else. Nausea and vomiting more marked in the

*Read before the Eye, Ear, Nose and Throat Section of the Kentucky State Medical Association, Louisville, May 17-18, 1934.

acute case is a helpful diagnostic feature but in the chronic patient and irregular in its occurrence is many times more confusing than helpful and causes serious consideration of a gastric lesion and is too frequently so treated. Occasionally the bowels are loose and contain considerable mucus. John B. Deaver formerly called attention to mucus in the stools in chronic appendicitis.

Acute Cholecystitis: This is most probably a hematogenous infection and such men as Kretz and Canon contend that even typhoid invasion of the gall-bladder is likewise hematogenous. Much experimental work has been done along this line, particularly by Rosenow. And cultures from tonsils, teeth, and sinuses of patients with cholecystitis when injected into animals have resulted in cholecystitis and isolation of the organism. Even later, stones when crushed and cultured have shown organisms in the stone similar to those injected. Frequently we have noted acute cholecystitis in the wake of a subsiding appendicitis and infection similar in both places and to an infection in a throat bearing out clearly the hematogenous origin of the last two infections.

Many times we are not able to secure a history of acute cholecystitis in our patients with chronic cholecystitis and we are lead to believe that in such cases the focal infections from which the bacterial invasion has taken place are also chronic and produces little or no local manifestations.

Gastric and Duodenal Ulcers: In mentioning this subject we know we are opening the way for considerable discussion and possibly more criticism but we feel that without some consideration in view of the detailed work along this line this subject would not be complete. The question is a mooted one and almost an unlimited amount of time could be devoted to it but we want to present it as we have observed it in our work. Only very recently Palmer of Chicago presented a splendid study of ulcer management and formation with liberal discussion by good authorities. These views were similar to those held by Sippy and many former workers in Chicago who have contended that the ulcer is the interaction between acid and mucosa. Several other views or theories regarding peptic ulcers are held by equally competent men but because of the subject of this paper we are presenting the one that more nearly fits this picture, namely the association of such focal infections as chronic tonsillitis, pyorrhea, dental abscess and chronic sinusitis and ulcer of the stomach and duodenum. The infections, causation of these lesions, are more than suggestive when we see case after case with typical ulcer symptoms and tendency to chronicity and after the removal of an appendix that has been suspicious and just recently become acute or subacute the patient recovers and is free from digestive disturbances. These cases can and usually do show x-ray evidence of ulcer. Both cholecystitis and appendicitis act according to the above description, and much laboratory evidence is published by leading authorities such as Rosenow and Sanders to show the cultural similarity of organisms from ulcers and from focal infections. Also Gerdine and Helmholtz hold the same views in appendicitis in children.

Besides this phase of the laboratory work, considerable animal experimentation has been done and definite strains, particularly of streptococci have been injected intravenously into animals with production of ulcers and recovery of the same organism from the lesion itself. The bacteria lodge in the terminal vessels of the submucosa. The resulting tissue reaction is productive of local hemorrhage and infiltration with plasma cells and leucocytes. The overlying mucosa becomes ischemic and devitalized and is readily digested by the digestive juice. If an artery is involved an early hemorrhage ensues. Rosenow contends that healing depends on the presence or absence of infection along the ulcer margin.

Acute Pancreatitis: Acute interstitial involvement is probably always the result of bacterial invasion. Some discussion as to the mode of invasion is natural since we feel the ascending infection through the pancreatic duct always results in a suppurative lesion and not the interstitial type. Opie believes the interstitial infection to be an ascending one from an acute gastric or duodenal infection. He draws a distinct differentiation from this type and the acute hemorrhagic or hemorrhagic necrosis associated with bile and pancreatic juice stagnation in the organ.

Again Rosenow has produced experimentally acute pancreatitis in animals by the infection of streptococci obtained from Steno's Duct of patients suffering from epidemic mumps. The virulence of the organism he claims determines the degree of organ involvement ranging from mild reactions in the form of hemorrhages and serofibrinous exudate to a destructive fulminating type requiring immediate surgical interference.

# Kentucky Medical Journal

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NEXT MEETING HARLAN, OCTOBER 1-4, 1934


## COUNTY SOCIETY REPORTS

**Henderson:** At the regular meeting of the Henderson County Medical Society, June 11, Dr. J. O. Strother delivered a paper on "Industrial Injuries."

Announcement of the Cancer meeting to be held in Henderson on July 9th with Dr. Irvin Abell as guest speaker on "Cancer of the Uterus."

WALTER L. O'NAN, Secretary.

**Grant:** The Grant County Medical Society met at the court house in Williamstown, June 20, with the following members present: A. D. Blaine, C. D. O'Hara, N. H. Ellis, J. L. Price, J. J. Marshall, J. W. Abernathy, H. F. Mann, C. M. Eckler, S. B. Rich, F. M. Clinkscales and C. A. Eckler.

In the temporary absence of the president, Dr. Blaine opened the meeting. The minutes of the last meeting were read and approved. Communications were acted upon and further business dispensed with. Refund was made to Dr. O'Hara of $1.70, the cost of a telegram sent on behalf of the Society.

The evening's topic for discussion was "The Diagnosis of Acute Mastoid Conditions. This was presented in an interesting and illuminating paper by Dr. Clifford Heisel of Covington. Dr. Heisel made a clear picture of conditions in this disease and explained how necessary it was to make an early diagnosis. The paper was thoroughly enjoyed by all present and was ordered in our State Journal. We thank Dr. Heisel for his up to date information and invite him to visit us again.

Dr. L. C. Hafer of Covington took an active part in the discussion that followed as did all present.

The program committee reported at this time that Dr. H. L. Classen, Skin Specialist, Cincinnati, would be present at our next meeting, the subject to be announced later.

Motion was made and seconded that a statement be sent the fiscal court for $300, the salaries due doctors of the county for pauper practice for 1933. This sum was set aside for doctors some years ago and has not been paid for 1933.

Meeting adjourned until the third Wednesday in July at the usual hour.

C. A. ECKLER, Secretary.

**Lawrence:** The Lawrence County Medical Society enjoyed one of the largest and best medical meetings of its history on May 3, 1934. The meeting followed a banquet at the M. E. Church, South in Louisa and progressed throughout the afternoon. Due to the large number of visiting speakers, Dr. L. S. Hayes,

Society President, dispensed with the routine business.

The first speaker was Dr. C. C. Howard, President of the State Board of Health, who gave an interesting address on the "Profession." This was followed by an address on "Medicine and Public Health," given by Dr. A. T. McCormack, Secretary, State Board of Health. In his address he stressed the importance of insistant support of our legislative bodies in enacting measures to insure continuance of our county school system.

Dr. R. J. Wilkinson of Huntington, W. Va. read an excellent paper on "Cancer of the Breast," which was lengthily discussed by the Society. Following this paper the Society heard a very practical address from Dr. J. B. Lukins of Louisville on the "Medico-Legal Situation in Kentucky."

The concluding paper of the afternoon was presented by Dr. W. E. Vest of Huntington, W. Va. on "Abscess of the Lung." This paper created much discussion in the assembly.

Before adjourning the assembly went on record as favoring a movement to create a fund in connection with our State dues by which practicing physicians in the State of Kentucky will pay an additional sum to cover Medico-Legal protection to the extent of covering suits to $10,000.00 and furnishing legal support in such proceedings.

Those present at this meeting were:A. T. McCormack of Louisville; J. B. Lukins, Jethra Hancock, L. H. South of Louisville; C. C. Howard of Glasgow; Walter E. Vest, R. M. Bobbitt, R. J. Wilkinson, H. E. Martin of Huntington, W. Va.; Proctor Sparks, J. B. Cooper, S. C. Smith. E. R. Fitch of Ashland; J. Watts Stovall, C. B. O'Rouke, Smithfield Keffer, R. G. Townsend of Grayson; H. T. Morris, Carl Gambell of Greenup; W. S. Morris, W. W. Meadows of Fullerton; E. E. Archer, J. P. Wells of Paintsville; Glen Johnson, A. G. Wilkinson of Wayne, W. Va.; W. M. Keith of Inez; A. W. Adkins of Morehead; Dr. and Mrs. D. J. Thompson of Webbville; W. R. Bishop of Blaine; L. S. Hayes, W. A. Hayes, J. W. McNabb, W. W. Wray, J. E. Carter, A. W. Bromley, Ira Wellman, F. A. Millard, W. C. Gose of Louisa; Mrs. A. T. McCormack, Louisville.

W. C. GOSE, Secretary.

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**Henderson:** Dr. Irvin Abell, of Louisville, addressed the meeting of the Henderson County Medical Society held July 9th, 1934, at 6:30 P. M. at the Soaper Hotel in Henderson. A dinner preceded the meeting.

Dr. Abell spoke on Cancer of the Uterus and this was part of the educational program being carried out through the state in early diagnosis of cancer.

Physicians attended from Owensboro: Drs. J. H. Thorpe, E. Dargin Smith, Robert Conner, P. D. Gillim, and S. P. Oldham.

C. B. Graves and H. B. Stewart, Morganfield; P. Cottingham, Uniontown; W. P. Woods, Evansville.

From Henderson County: Drs. J. C. Moseley, G. F. Clay, P. Ligon, E. N. Powell, G. W. White, F. J. Clark, W. V. Neel, J. R. Hodges, R. K. Galloway, J. C. Rogers, R. E. Smith, J. O. Strother, Silas Griffin, and Walter O'Nan, of Henderson County.

Following the meeting the entire attendance joined in bowed heads, in silent memory to Mme. Cure, the co-discoverer of Radium.

WALTER L. O'NAN, Secretary.

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**Jefferson:** Dr. Hugh Leavell, City Health Officer, has given the members of the Jefferson County Medical Society the opportunity of examining the 5000 food handlers of Louisville. A fee will be collected for this service.

Detail instructions will be given of the procedure.

C. M. EDELEN, Secretary.

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**McLean:** At the meeting of McLean County Medical Society Tuesday night, the following officers were elected: O. V. Brown, M. D., Island, President; G. L. Thompson, M. D. Calhoun, Secretary; F. L. Johnson, M. D. Livermore, Delegate; W. W. Spicer, M. D., Calhoun, Alternate.

G. L. THOMPSON, Secretary.

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**Grant:** The Grant County Medical Society held it's regular meeting May 16, 1934 in the court house in Williamstown, at 7:30 P. M with the following members present: Drs. Marshall, C. M. Eckler, J. D. George J. W. Abernethy, J. L. Price, N. H. Ellis, A. D. Blaine, H. F. Mann, and C. A. Eckler.

Dr. Ray of Independence, Ky. was a visiting brother at this meeting, also Dr. Clinkscales, a dentist, of Williamstown, honored us with his presence.

The meeting was opened with Dr. H. F. Mann, President in the Chair. The minutes of last meeting were read and approved and all business dispensed with and we immediately took up the subject for the evening, "Cancer of the Uterus," which was beautifully demonstrated with lantern slides and in reality was an up to date illustrated lecture.

Dr. Wallace Frank, Chairman of the Cancer Committee, was present in person and delivered a most excellent lecture, up to date in every particular and was a real treat to the doctors of Grant County.

We regret indeed that more of the doctors from adjoining counties were not present, as we had sent out some fifty invitations but they were the losers in their absence. We extend an open

door to Dr. Frank and thank him deep down in our hearts for the kindness he showed us manifested in presenting this lecture.

It was discussed at length by members present, each one showing some experiences in this dire disease. We hope to be able to have an interesting meeting each month and desire to meet to exchange thoughts for the betterment of humanity.

A program committee for the year was appointed by the chair, consisting of Drs. Marshall, Price and Abernathy.

Dr. Hiesel, a nose and throat man of Covington, will entertain us next meeting, subject announced later.

We now adjourned to meet the third Wednesday in June at the usual hour.

C. A. ECKLER, Secretary.

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**Henderson:** Henderson County Medical Society met Monday, May 14th at 8 P. M. at the Henderson Hospital, with the following members present: Drs. Neel, Smith, R. K. Galloway, Sigler, White, Strother, Powell and O'Nan.

Dr. Emerson Smith was the speaker of the evening, his subject being "Angina Pectoris." The entire attendance joined in the discussion.

WALTER L. O'NAN, Secretay.

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**Letcher:** The Letcher County Medical Society assembled in the Men's Bible Class Room, Whitesburg, Tuesday night 26th, at 7:30 P. M.

The following physicians and guests were present: T. M. Radcliffe, President of Society, Kona; E. F. Sheppard, Jenkins; Noah H. Short, Norton, Virginia; Virgil Skaggs, Fleming; J. E. Crawford, Whitesburg; R. Dow Collins, Whitesburg; T. R. Collier, Whitesburg; J. M. Bentley, D. D. S., Fleming; Claude Passmore, Druggist, Whitesburg; R. E. May, Attorney.

The meeting was called to order by the President, Dr. Radcliffe. The reading of the minutes of the previous meeting was given and approved. The scientific paper of the evening was given by Dr. Noah H. Short, Norton, Virginia on Sinusitis. This was a most instructive discourse, well presented and highly enjoyed by those present. After the reading of the paper, most all had many questions to ask Dr. Short relative to Sinus pathology, etc.

The Society was invited to meet with Dr. Short at Norton at its next meeting in Banquet session; also a hearty invitation was extended by Dr. Sheppard to meet at Jenkins in the near future, and he, too, promised to have "good things to eat, and maybe to drink."

After the business session, the Society adjourned till the regular July meeting, on the 31st.

R. DOW COLLINS, M. D., Secretary.

**Fifth District:** At a regular meeting of the Fifth District Medical Association held in Carrollton on May 10th, 1934, present: Dr. George Purdy, President; E. B. Smith, Vice-President, and the following members: J. A. Arnold, Louisville; A. P. Dowden, Eminence; O. B. Humston, Franklinton; W. W. Leslie New Castle; W. E. Morris, Shelbyville; K. S. McBee, Owenton; Allen Donaldson, Carrollton; David G. Pryor Carrollton; J. H. Chrisman, Owenton; J. M. Ryan, Carrollton; W. E. Threlkeld, Wheatly; B. L. Holmes, Carrollton; W. B. Messink, Worthville; O. P. Chapman, Port Royal; W. J. Henry, Louisville; Carlisle Morse, Louisville; Benjamin F. Aydelowte, Louisville; W. E. Gardner, Louisville; Maurice Bell, Eminence; D. Y. Keith, Louisville; J. D. Allen, Louisville; LaMar Neblette, Louisville; Harry M. Weeter, Louisville; J. W. Schupert, Warsaw; J. S. Brown, Ghent; L. Wallace Frank, Louisville; H. F. Wilson, Covington; J. F. Gravey, Carrollton; B. K. Menefee, Covington; O. E. Senour, Erlanger.

The meeting was called to order by Dr. George Purdy, the retiring President, who introduced E. B. Smith of Shelbyville, the incoming President. Dr. Smith responded, urging a larger attendance at our meetings and emphasized the benefit these meetings have been to the physicians in this district. Minutes of the last meeting were read by the Secretary and adopted as read, the program was as follows: First paper by Dr. I. A. Arnold. Subject: Gas Gangrene and Its Treatment. This paper was discussed by Drs. Henry, Keith, Morse, Purdy and Smith.

Second paper by Dr. D. Y. Keith. Subject: The Use of Radiology in General Practice. Showing a number of slides. The papers was discussed by Dr. Donaldson, J. D. Allen, Morse and Wallace Frank.

The meeting adjourned for luncheon at 1:00 o'clock and resumed the program at 2:00, with a paper by Dr. Wallace Frank on Cancer of the Uterus. This paper was discussed by Drs. Henry, Keith, Weeder, Neblett, and Eslie Asbury.

On motion it was decided to hold a meeting in August, under the supervision of Dr. Philip Barbour and the Secretary is directed to confer with Dr. Barbour in regard to it. The meeting will be held in Eminence, some time during the month of August and notice will be sent to the Secretaries of the different County Societies.

Our next regular meeting will be in November and we urge a full attendance.

OWEN CARROLL, Secretary.

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*and* MENTAL
DISEASES
DRUG ADDICTION
ALCOHOLISM
*and*
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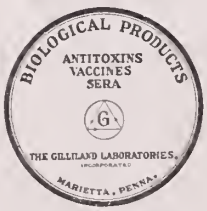
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*ANNUAL NUMBER*

# KENTUCKY MEDICAL JOURNAL

Published Monthly by the Kentucky State Medical Association Under the Supervision of the Council

VOL. 32. NO. 9 | BOWLING GREEN, KY., | SEPTEMBER, 1934

THE N.Y. ACADEMY OF MEDICINE
SEP - 6 1934
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Entered as second-class matter, Oct. 22, 1916, at the Postoffice at Bowling Green, Ky. Acceptance for mailing at special rates postage provided for in section 1103, act of October 8, 1917, authorized May 25, 1920


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# The cereal-starch of PABLUM is more quickly digested than that of long-cooked cereals

FOR many years it has been the custom to cook infants' cereals one, two, and even three hours to increase their digestibility. The microscope (and clinical tests*) now prove that this bothersome and expensive long cooking is unnecessary with Pablum. For, being pre-cooked at 10 pounds steam pressure and dried, it is so well cooked that it can be served simply by adding water or milk of any temperature. Photomicrographs and also digestibility studies *in vitro* give evidence of this thorough cooking.

Fifteen cereals (both cooked and uncooked) studied microscopically were revealed as containing many starch granules, most of them massed into dense clumps. *Such unruptured clumps were never observed in hundreds of examinations of Pablum.* The latter consists, rather, of porous flakes which, like sponges, drink up liquids. Hence Pablum can be entirely saturated by the digestive secretions. This is borne out by studies of Ross and Burrill who found that the starch of Pablum is more rapidly digested than that of ordinary cereals cooked 4 hours.

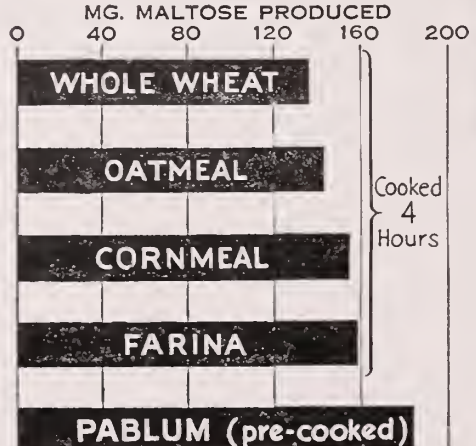
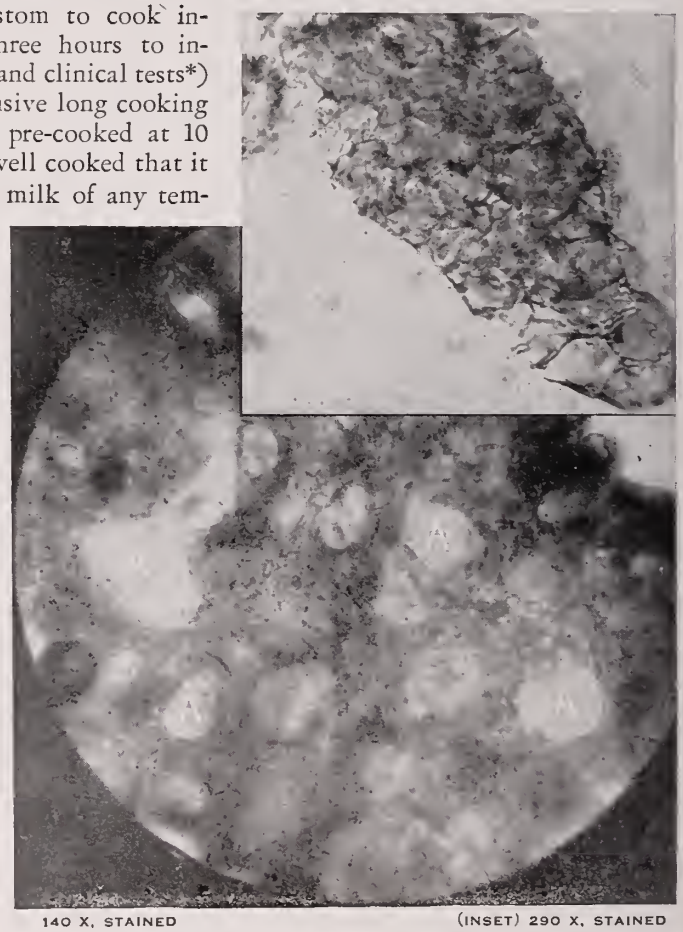



*Chart shows that maltose production is much greater for Pablum prepared with cold water than for other cereals cooked 4 hours. Ross and Burrill (Journal of Pediatrics, May 1934) conclude from this and from the total soluble carbohydrate formed that starch digestion of Pablum is more rapid than that of 6 other cereals.



140 X, STAINED (INSET) 290 X, STAINED

*Large photomicrograph:* Pablum mixed with cold water—portion of large flake. Pablum flakes are honeycombed with "pores" or air-spaces (note light areas A). This porosity permits ready absorption of digestive fluids by the entire flake. No starch granules are visible—they have been completely ruptured.

*Inset:* Farina cooked ½ hour—clump of cereal composed of unruptured starch granules. Note density of clump and lack of porosity. Many starch granules, such as are present in raw cereal, remain unchanged in form.

BESIDES being thoroughly cooked and readily digestible, Pablum supplies essential vitamins and minerals, especially vitamins A, B, E, and G, and calcium, phosphorus, iron, and copper. It is a palatable cereal consisting of wheatmeal, oatmeal, cornmeal, wheat embryo, alfalfa leaf, beef bone, brewers' yeast, and salt.

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Floyd W. Aplin, M. D.

Waukesha, Wis.

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Incorporated.

**1412 Sixth Street** **Louisville, Kentucky**

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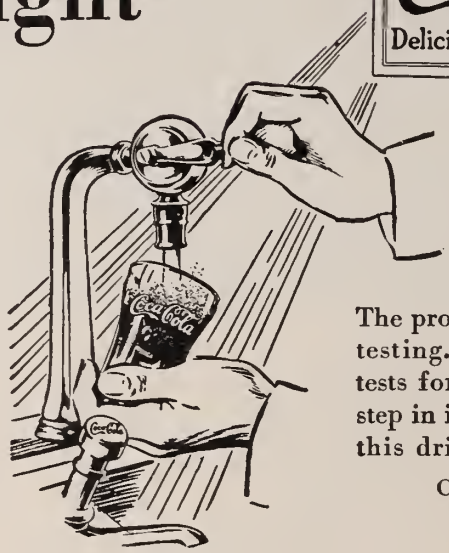
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## CALENDAR OF COUNTY SOCIETY MEETINGS

| COUNTY | SECRETARY | RESIDENCE | DATE 1934 |
|---|---|---|---|
| Adair | N. A. Mercer | Columbia | September 5 |
| Allen | A. O. Miller | Petroleum | September 26 |
| Anderson | J. B. Lyon | Lawrenceburg | September 3 |
| Ballard | F. H. Russell | Wickliffe | September 11 |
| Barren | Paul S. York | Glasgow | September 19 |
| Bath | H. S. Gilmore | Owingsville | September 10 |
| Bell | J. G. Foley | Pineville | September 14 |
| Boone | R. E. Ryle | Walton | September 19 |
| Bourbon | W. B. Hopkins | Paris | September 20 |
| Boyd | R. G. Culley | Ashland | September 4 |
| Boyle | P. C. Sanders | Danville | September 11 |
| Bracken | J. M. Stevens | Brooksville | September 3 |
| Breathitt | O. M. Goodloe | Jackson | September 18 |
| Breckinridge | J. E. Kincheloe | Hardinsburg | September 13 |
| Bullitt | S. H. Ridgeway | Shepherdsville | September — |
| Butler | G. E. Embry | Morgantown | September 5 |
| Caldwell | W. L. Cash | Princeton | September 4 |
| Calloway | A. F. Russell | Murray | September 6 |
| Campbell-Kenton | Luther Bach | Bellevue | September 6-20 |
| Carlisle | G. W. Payne | Bardwell | September 4 |
| Carroll | J. M. Ryan | Carrollton | September — |
| Carter | R. G. Townsend | Grayson | September 11 |
| Casey | Wm. J. Sweeney | Liberty | September 27 |
| Christian | M. A. Gilmore | Hopkinsville | September 18 |
| Clark | R. H. Scobee | Winchester | September 21 |
| Clay | J. L. Anderson | Manchester | September — |
| Clinton | S. F. Stephenson | Albany | September 15 |
| Crittendon | C. G. Moreland | Marion | September 10 |
| Cumberland | W. F. Owsley | Burkesville | September 5 |
| Daviess | I. A. Thorpe | Owensboro | September 11-25 |
| Elliott | | | September — |
| Estill | Walter Cox | Irvine | September 12 |
| Fayette | John Harvey | Lexington | September 11 |
| Fleming | J. B. O'Bannon | Flemingsburg | September 12 |
| Floyd | E. E. Martin | Allen | September 14 |
| Franklin | W. S. Snyder, Jr. | Frankfort | September 6 |
| Fulton | Glynn F. Bushart | Fulton | September 12 |
| Gallatin | J. M. Stallard | Sparta | September 20 |
| Garrard | B. Earl Caywood | Lancaster | September 20 |
| Grant | C. A. Eckler | Dry Ridge | September 19 |
| Graves | H. H. Hunt | Mayfield | September 4 |
| Grayson | C. F. Blankenship | Leitchfield | September 27 |
| Green | S. J. Simmons | Greensburg | September 3 |
| Greenup | Carl M. Gambill | Greenup | September 14 |
| Hancock | F. M. Griffin | Hawesville | September 3 |
| Hardin | D. E. McClure | Elizabethtown | September 13 |
| Harlan | Clark Bailey | Harlan | September 29 |
| Harrison | W. B. Moore | Cynthiana | September 3 |
| Hart | S. F. Richardson | Munfordville | September 4 |
| Henderson | Walter O'Nan | Henderson | September 10-24 |
| Henry | Owen Carroll | New Castle | September 24 |
| Hickman | Chas. Hunt | Clinton | September 6 |
| Hopkins | David L. Salman | Madisonville | September 6 |
| Jackson | | | September 1 |
| Jefferson | Chas M. Edelen | Louisville | September 3-17 |
| Jessamine | J. A. VanArsdall | Nicholasville | September 20 |
| Johnson | P. B. Hall | Paintsville | September 8 |
| Knott | M. F. Kelley | Hindman | September 22 |
| Knox | F. R. Burton | Barbourville | September 28 |
| Larue | D. W. Gaddie | Hodgenville | September — |
| Laurel | Oscar D. Brock | London | September 12 |
| Lawrence | W. C. Gose | Louisa | September 17 |
| Lee | W. D. McCullom | Beattyville | September 8 |
| Leslie | John H. Kooser | Hyden | September — |
| Letcher | R. Dow Collins | Whitesburg | September 25 |
| Lewis | J. D. Liles | Vanceburg | September 17 |
| Lincoln | Lowis J. Jones | Houstonville | September 21 |
| Livingston | Wm. C. Davis | Salem | September — |
| Logan | Walter Byrne, Jr. | Russellville | September 5 |
| Lyon | H. H. Woodson | Eddyville | September 4 |
| McCracken | Leon Higdon | Paducah | September 12-19 |
| McCreary | R. M. Smith | Stearns | September 3 |
| McLean | G. L. Thompson | Calhoun | September 18 |
| Madison | Hugh Mahaffey | Richmond | September 20 |

| COUNTY | SECRETARY | RESIDENCE | DATE 1934 |
|---|---|---|---|
| Marion | W. C. Griffey | Lebanon | September — |
| Marshall | S. L. Henson | Benton | September 19 |
| Mason | Allen F. Murphy | Maysville | September 12 |
| Meade | A. A. Baxter | Brandenburg | September 27 |
| Menefee | E. T. Riley | Frenchburg | September — |
| Mercer | J. Tom Price | Harrodsburg | September 11 |
| Metcalfe | P. W. Bushong | Edmonton | September — |
| Monroe | Geo. E. Bushong | Tompkinsville | September — |
| Montgomery | D. H. Bush | Mt. Sterling | September 11 |
| Morgan | W. H. Wheeler | Betsy Sayne | September — |
| Muhlenberg | G. L. Simpson | Greenville | September 11 |
| Nelson | R. H. Greenwell | Bardstown | September 19 |
| Nicholas | T. P. Scott | Carlisle | September 17 |
| Ohio | Oscar Allen | McHenry | September 5 |
| Oldham | S. J. Smock | LaGrange | September 4 |
| Owen | K. S. McBee | Owenton | September 6 |
| Owsley | D. E. Wilder | Booneville | September 5 |
| Pendleton | W. A. McKenney | Falmouth | September 12 |
| Perry | R. L. Collins | Hazard | September 10 |
| Pike | M. D. Flanary | Pikeville | September 3 |
| Powell | I. W. Johnson | Stanton | September 3 |
| Pulaski | M. C. Spradlin | Somerset | September 13 |
| Robertson | | | September 17 |
| Rockcastle | Lee Chestnut | Mount Vernon | September — |
| Rowan | G. C. Nickell | Morehead | September 25 |
| Russell | J. B. Scholl | Jabez | September 10 |
| Scott | F. W. Wilt | Georgetown | September 6 |
| Shelby | W. E. Morris | Shelbyville | September 20 |
| Simpson | N. C. Witt | Franklin | September 11 |
| Spencer | | | September — |
| Taylor | W. B. Atkinson | Campbellsville | September 6 |
| Todd | B. E. Boone, Jr. | Elkton | September 5 |
| Trigg | H. L. Wallace | Cadiz | September 26 |
| Trimble | J. J. Gerkins | Bedford | September — |
| Union | D. C. Donan | Morganfield | September 26 |
| Warren | Hal Neal | Bowling Green | September 12 |
| Washington | J. H. Hopper | Willisburg | September 19 |
| Wayne | R. E. Teague | Monticello | September 6 |
| Webster | C. M. Smith | Dixon | September 28 |
| Whitley | C. A. Moss | Williamsburg | September 6 |
| Wolfe | G. M. Center | Campton | September 3 |
| Woodford | Chas. F. Voigt | Midway | September 6 |


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To the busy physician time is money. When he grants an interview to a manufacturer's representative, Eli Lilly and Company feel that he is entitled to a message comparable in value to the time given.

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C. C. Howard

PRESIDENT KENTUCKY STATE MEDICAL ASSOCIATION, 1934

# KENTUCKY MEDICAL JOURNAL

BEING THE JOURNAL OF THE KENTUCKY STATE MEDICAL ASSOCIATION

**Published Under the Auspices of the Council**

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## THE ANNUAL SESSION

This Annual Number of the JOURNAL contains the financial reports of the secretary and treasurer as compiled by our auditor, and the status of membership of the Association by counties and councilor districts, as of August 10th. As has been the custom of this Association, the financial statements are given in detail so that every member can know just exactly how the funds have been expended.

It is gratifying to note the increase in membership in almost every county in the State. This is one of the indices of recovery and indicates the sincere interest of the profession in the work of organized medicine. This has always seemed sufficiently complicated, but, just at this time, when the whole world seems to be reorganizing, it is particularly important that our great profession shall continue to maintain the high standards of service that are traditional with it. One familiar with the fierce social conflicts in other states and nations could hardly help congratulating the profession of Kentucky that its people, for more than half a century, have permitted the medical profession to consider and solve medical and health problems. The fact that successive sessions of the Legislature have placed the responsibility for public health and medical service upon the shoulders of our profession makes the annual session of the House of Delegates of increasing importance.

Of course, the recognized essential for a State Medical Meeting is the scientific program. Its consideration gives an annual opportunity for the members of the profession to keep abreast of scientific medical problems so that they can more effectively serve their people. Scientific knowledge, however, is far in advance of its practical application and society has made such progress in its social order that organized and united effort is necessary to reach those who need it with their quota of service. It is to this end that organized medicine has developed such legislative bodies as the House of Delegates of the State Associations and of the parent organization, the American Medical Association. It has been the general purpose of these medical legislative bodies to preserve all of the good in the traditional practice of medicine and, at the same time, to experiment along research lines with suggested social advances that apparently have some reasonable basis. Powerful efforts are being made to socialize the practice of medicine under the control of groups who know nothing about it except that it would promote their standing if they could have control of so beneficent and essential a service. Under the guise of the promotion of social welfare our profession is in some danger of losing its own initiative and control, and it, therefore, behooves us to be on the alert so that we may demonstrate that we may continue the control of medical service and public health to the better advantage of the people generally than to submit ourselves to the control of groups who call themselves social workers, or social economists, and whose chief interest is in exploiting the medical profession. It is for this reason that the Harlan Session of the House of Delegates is of more than usual importance and it is for this reason that President Martin and President-Elect Howard are urging every county to be represented at the opening session of the House of Delegates on Monday, October 1.

The reference committees which will present these various important subjects have been at work for some months. The list of the committees is presented in this issue of the JOURNAL, and individual members or county societies are urged to send to the chairman of some one of the committees any appropriate suggestions as to its report or procedure. If all the members will assist in this way in the formulation of policies the Harlan Session will be a notable one in the brilliant annals of Kentucky's medical history.

In addition to the annual address of the President and the annual orations in medicine and surgery, delivered by two of our own distinquished members, the Session will have two of the outstanding leaders in American medicine as its guest speakers. Doctor Kennon Dunham, of Cincinnati, is one of the controlling influences in the National Tuberculosis Association and Dr. William D. Haggard, of Nashville, an honorary member

of this Association, is a former President of the Southern Medical, the American Medical, and the Southern Surgical Associations, and his charm and standing in the profession combine to make him the most sought after speaker amongst the leaders of American medicine.

The drive to Harlan from any part of Kentucky is well worth while. Those from the western part of the State will probably desire to go through Bowling Green or Russellville and through to Cumberland Falls to Corbin and Harlan, returning home, possibly, by way of Pine Mountain, Whitesburg, Hazard and Mt. Sterling, through the historic Blue Grass section. From the eastern part of the State the drive down the Mayo Trail in the Big Sandy Valley to Whitesburg and then over to Pine Mountain, is one of the greatest scenic trips in America.

The Louisville and Nashville Railroad, with its usual forethought, has arranged to attach special sleepers to the Harlan trains leaving Louisville at 7:00 P. M. on both October 1 and 2, and sleepers will also be attached to the trains leaving Harlan at 6:55 P. M., October 3 and 4, for the return trip. The railroad fare for the round trip will be $9.75, to which would be added the cost of the lower birth $2.50, or an upper berth $2.00, or a drawing room $9.00. Reservations may be made through Mr. E. G. Jones, City Passenger Agent, L. & N. R. R., Louisville. Mr. Jones assures us that as many Pullmans will be attached to these trains as may be found necessary for the comfort of those making the trip.

The hospitable physicians and people of the mountains are eagerly looking forward to the most largely attended and best medical meeting that has ever been held in the Commonwealth.

## THE LATCHSTRING IS OUT IN HARLAN

The Kentucky Medical Association will hold its annual convention in Harlan, this year. In olden times conventions were held only in the large cities, where spirits were convivial and where the delegate might slake his thirst and make whoopee in general without molestation. To have held a convention, medical or otherwise, in a city that did not boast a burlesque show would have been as inconsistent as serving ham and eggs without the eggs.

Those were "the good old days," so they say, but that was a long time ago. That was back in the bicycle days, bicycles with rumble seats . . . . when women wore bustles, and female legs were mysteries . . . . when a fried oyster or a hard boiled egg went with a schooner. Those were the days, the good old days when honesty was the best policy, and it was illegal to swear a lie.

In those days a convention was an event to look forward to for months ahead, and to be talked about for months afterwards. People traveled on trains then instead of gas buggies, and the scenery consisted of flickering telegraph poles and an occasional Bull Durham sign. Billboards were not so frequent in those days, glory be, but the traveler could enjoy instead the signboards on the ends of the various passenger and freight depots which carried the name of that particular village or town, together with the information that it was so many miles from Louisville or Nashville.

Sometimes a delegate went to a convention and was able to come away with a complete report of the entire convention program. If he did it was because he very carefully purchased every edition of the daily papers and carefully clipped all articles dealing with this particular convention. Nobody attended all the sessions then any more than they do today.

We are writing of the past; call them the good old days if you wish. Maybe they were good, and maybe not. We mention them for comparison with the present, and especially with reference to styles in conventions. Styles have changed, and the purpose of conventions has been broadened. It is no longer necessary to select a large and populous center that is located upon a main line railroad, nor is it essential that burlesque facilities be available. Improved highways have made it possible to hold conventions almost anywhere, and for another thing, no one gets excited any more and pays out good money to go to a burlesque show and see a fat lady pose as living statuary. Why should they when they can stand on any street corner and see more for less.

In the good old days Mr. Delegate thought it was a clever ruse he was pulling in getting away from the ever menacing shadow of his wife's guardianship. Now he takes her with him. Two can travel in a car as cheaply as one, and Mrs. Delegate is prompt to call attention to this, with the result that conventions are bigger and better. Eyes that were wont to feast upon the gorgeous curves of the fat burlesque queen, now gaze upon a rolling landscape of meadows, valleys and mountains as the driver sits beneath the wheel and rolls leisurely towards his convention city.

The convention of the Kentucky Medical Association will be an outing for a lot of people. Its location in Harlan provides scenic attractions worthy of every effort necessary

to attend it. It will be an ideal vacation to Mr. Delegate and the wife of Mr. Delegate.

Harlan is in the heart of the mountains of Southeastern Kentucky, away up next to the Virginia line, 238 miles southeast of Louisville. Elevation 1195 above sea level. On top of Big Black Mountain above Lynch, is the highest point in Kentucky, four thousand feet, reached by a good hard surfaced highway.

At Lynch is located the ideal mining city of eight or ten thousand owned by the U. S. Coal & Coke Company, and containing the largest coal tipple in the world which cost more than a million dollars to install.

Over across Pine Mountain in Harlan County is Pine Mountain Settlement School established by William Creech and deeded to the school "as long as the constitution of the United States shall stand" for the purpose as stated by him, "Hopin' it may make a bright and intelligent people after I am dead and gone." You ought to plan your trip to visit the school and see the realization of Uncle William's dream.

If you drive in on Route 25 you can take an hour or two off at Corbin and drive out to Cumberland Falls, or maybe go to Cumberland Gap and see the gateway through which the civilization of the west passed. The Skyline Highway was built to carry visitors to the top of the Pinnacle. It is inspiring to look down from the top of a mountain. Heaven is just a little bit closer up there.

You will be entertained at Harlan. Those of you who love golf will enjoy your annual tournament over the Harlan Country Club course. Refreshments will be available (and we think we know our refreshments). We do not know your capacity, but we will take your word for it and we promise you a capacity entertainment.

We have a lot of good roads in Harlan County and a lot of places to show you. Come up and see us. We will be glad to see you and you will be glad you came.

CHARLES D. COLE, Attorney.

## A SHORT HISTORY OF HARLAN

Harlan County has had the most rapid and recent development from "the land of log cabins" to industrial prominence than, perhaps, that of any other section of our country. Since 1910, a period of only twenty-four years Harlan has grown from infancy to full adulthood in commercial life. A startling picture of its growth is revealed in the increase of its population: from 10,566 in 1910 to approximately 70,000, or more, today.

The year 1910, the advent of the railroad, marks the turning point in Harlan's history. For a century and a quarter prior to that




LEWALLEN HOTEL, HARLAN
Headquarters for the Kentucky State Medical Association Convention, October 1-4.

time, life had been practically the same among its inhabitants. Its earlier settlers and their descendants led a secluded life, yet happy, though filled with many hardships. Surrounded with mountains which formed almost an impenetrable barrier, with inadequate roads that were little more than animal paths, impassable most of the year, the inhabitants were deprived of the newer methods of living that were rapidly developing in the more easily accessible regions of the country. Hedged in as they were, they retained until the early twentieth century the old methods and customs brought into their country by the first settlers of the eighteenth century. These men and women were of Anglo-Saxon descent, whose immediate ancestors had emigrated from England, Wales, Scotland and Ireland, where, in their days, the clanish rule was markedly prevalent. The clannish rule was nurtured further in this County by the long isolation of its people. Each man's honor, together with the skilled use of his rifle, backed up by the other members of his family, remained for a long time the highest law he recognized, while the county government was slowly gaining in power over the clannish settlers. They were imbued with the principle "they treat you right and make you treat them right." This isolation contributed to another trait of its inhabitants, which has been heralded as far as they are known: the mountain hospitality. The stranger sojourn-



PRESBYTERIAN CHURCH
One of the most beautiful of Harlan's Churches.



METHODIST CHURCH, HARLAN, KENTUCKY
Place of meeting of Scientific Session and House of Delegates.



Chained Rock, overhanging Pineville, in Pine Mountain State Park

ing at the home of the Harlan County backwoodsman is given the bed, if there is only one, and the family sleep on the floor, true to their reputation for generous hospitality. During practically all of this period, each family cultivated its own crops, made its own clothing, and was self-sustaining in nearly every way.

During the nineteenth century, and until 1910, all the merchandise brought into Harlan was hauled from Hagan or Jonesville, Virginia, in covered wagons drawn by horses or mules. The roads narrow, rocky and muddy, causing the rugged "teamsters" great hardships in making the four days round trip. At that time Harlan had very little products to offer in exchange for merchandise, except hides, ginseng and timber. The only important industry was "logging." The logs were hauled by mules or oxen to the river, branded and floated in rafts down to Pineville or other markets farther away.

The logging industry has developed in such proportions in Harlan County since 1910, that it is now second in importance to the coal industry, yielding an annual output of two million dollars. Many small, steam saw-mills are in operation throughout the County, shipping finished lumber by rail. A modern mill and large lumber camp is operated at Putney, in this County, by the Inter-Mountain Coal and Lumber Company, which controls thousands of acres of timber on the north side of Pine Mountain and in the hills to the north. An up-to-date tram road extends across the mountain for miles, over which is operated a small steam engine and several log cars.

During the years 1902 and 1903 the Kentucky State and United States Geological Survey made a complete geological survey of Harlan County, disclosing to the rest of the United States the vast natural future wealth to be found in its hills and the possibilities of an immediate future development of its rich bituminous coal deposits. The Kentenia Corporation and other land companies, and individuals, bought up immense boundries of coal and timber lands. By the concerted efforts of the large land owners, strengthened by the report of the geological survey, the Louisville & Nashville Railroad Company was finally induced to extend its railroad into Harlan County in 1910. This marked the beginning of the rapid development of one of the leading coal fields in the United States. Harlan County quickly emerged from an obscure backwoods mountain county to an industrial field recognized all over our country for its superior grade of coal. Low in ash and sulphur, Harlan coal takes its place as the best all-around coal in the world. Shortly after 1910, the United States Coal and Coke Company, a subsidiary of the United States Steel Company, sent out an advance agent to search for the best coal field that could be found for its purpose, for immediate development. After searching several fields, he wired back that he had found just what they wanted—in Harlan County. Then was begun



HARLAN COUNTY COURT HOUSE
A new modern Court House, one of the finest in Kentucky. The "Jail House" is located on the third floor.



HARLAN HOSPITAL
Modern Hospital of fifty-bed capacity, located at Harlan

the construction of one of the largest mining towns in the world, the Town of Lynch in Harlan County. This town rapidly grew to a population of 10,000, with concrete streets, beautiful architectural work and buildings, well-kept lawns and property, and the largest and most up-to-date department stores in Southeastern Kentucky. The largest coal tipple in the world is in use there.

The Wallins Creek Colliers Company opened the first coal mines in Harlan County, on Terry's Fork, near Wallins Creek, for shipping, and on August 25, 1911, shipped the first car of coal from the County. In that year, 25,840 tons of coal were shipped by rail from Harlan. The output of coal from the Harlan fields increased to 14,410,958 tons in the year 1928, the peak year, as the product of seventy-one mines, exclusive of wagon mines. This placed Harlan among the foremost counties in the United States for coal production, and by far the leading producer in Kentucky. Most of the largest mines in this County are industrial owned. The Wisconsin Steel Company of Benham is a subsidiary of the International Harvester Corporation; the King Harlan Company, of the Detroit-Edison Company; The Black Mountain Corporation, a subsidiary of the Public Utilities. The enormous coal production has transformed Harlan County from a pauper county to one of the five richest counties in the state.

Harlan County contains six towns with a population of 2500 or more. The City of Harlan, the county seat, has a population of approximately 5000, though in 1875 only ten families lived here. It has practically new concrete and asphalt streets, a large, modern City Hall, the best incinerator of any town of its size in Kentucky, four concrete bridges spanning Cumberland River and its forks, and the most modern and complete water plant in Southeastern Kentucky. It has one of the best equipped and best managed graded and high schools in Eastern Kentucky, ranking as double A. Harlan County boasts of four major state highways, paved with concrete and asphalt, affording one of the most beautiful river drives in the Eastern States. A concrete highway leads from Pineville to Harlan, up Cumberland River. A newly constructed asphalt highway, the Mayo Trail, leads from Harlan, up the Poor Fork River to the Virginia line. And two highways are now being oil-coated from Harlan along the Clover Fork and Martins Fork Rivers. Five beautiful churches and other smaller ones are found in Harlan's County Seat, and a large number of smaller churches are scattered throughout the County.

Since the beginning of the operation of the mines, several foreign-born, Italians, Swedes, Hungarians, Greeks and others have come into Harlan County to work, but they are becoming naturalized and making good citizens. Yet, near ninety per cent of the people employed and living in Harlan County are Americans. It was perhaps in Harlan County that the attention of America was first called to the immediate danger of communistic teachings and organizations.

When the movement of tourists and visitors starts through Harlan County, they will find Harlan a land of natural beauty, patriotism, industrial development, and courteous hospitality.

ELMON MIDDLETON,
County Attorney, Harlan.



BAPTIST CHURCH
One of Southeastern Kentucky's largest Churches



CUMBERLAND FALLS



Scenic grandeur along another trail in Pine Mountain State Park

SCENES NEAR MIDDLESBORO



Chimney Rock on Pinnacle Mountain



Shillaly Falls, near Middlesboro, Ky.



Skyland Highway.




Maps of Harlan County showing routes to Harlan.

## INTRODUCING OUR VICE-PRESIDENTS

Dr. H. G. Sandlin, Richmond, representing the eastern part of the State, has practiced medicine in Manchester, Lancaster and Richmond, and for the last fifty-five years has attended every State meeting.

Early in life he took an active part in education and for twelve years has been Chairman of the Richmond City School Board and a member for twenty-two years.

Dr. Sandlin was one of the organizers and



DR. H. G. SANDLIN, Richmond
Vice-President

Chairman of the Madison County Board of Health. He has been President and Secretary of the Madison County Medical Society. He has been active in all civic affairs of both the city and county. His work has always been a labor of love. He has never held nor sought a remunerative office.

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Edward R. Palmer, Louisville, was born November 29, 1871. He received his preliminary education in the Louisville Public School and in the Chenault Private School. In 1888 and 1889 he attended Phillips Academy at Andover, Massachusetts and in 1889 he matriculated at Princeton University. From here he was graduated in June of the year 1893 with an A. B. degree.

In September of the same year he returned to Louisville to begin his medical education. He entered the Medical Department of the University of Louisville and was graduated with the degree of M. D. in March, 1896. He spent the next two years as demonstrator of chemistry at the University of Louisville. In 1898 he became demonstrator of pathology



Edward R. Palmer, A. B., M. D.
Louisville.
Vice-President

and in 1905 he assumed the chair of a professorship in physiology at the University of Louisville.

In 1910 he entered private practice. Dr. Palmer is a past president of the Louisville Urological Society, of the Louisville Society of Medicine, and of the Jefferson County Medical Society. Was orator in medicine and has the distinction of being the first and only orator who delivered his oration without notes. Three times he has given the address of welcome to the State Association, at the Owensboro-Louisville meeting he gave the address of welcome and the response to the address of welcome immediately afterwards.

His theories in regard to treatment of syphilis have received national recognition.

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Dr. J. C. Morrison, Hickman, the Vice-President from the western part of the state writes he has not had a picture made since he graduated. The JOURNAL will endeavor to have the doctor overcome this reluctance in a future edition.

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## CUMBERLAND FALLS

The Director of the State Park Commission extends a cordial invitation to all the members attending the Harlan Convention to visit Cumberland Falls, on a beautiful road only eighteen miles from Corbin. Those who desire a different route on returning home, can ferry the river at the Falls and take the sunset trail to Somerset and then join the main highway. The scenic grandeur of this route is not surpassed anywhere in America.

## OUR DISTINGUISHED GUESTS

Dr. Kennon Dunham, Cincinnati, will give the annual address before the Association at the public meeting Wednesday at 8 P. M. His subject is entitled Pulmonary Emphysema, A Sequelae of Pulmonary Tuberculosis. Dr. Dunham is one of Cincinnati's best known internists and tuberculosis specialists; he teaches this subject in the Medical Department of the University of Cincinnati. He has written several books on X-ray chest findings, checked by post mortem and comparing with the physical examination. He is chairman of the building committee which has just completed the Hamilton County Tuberculosis Sanatorium.



DR. KENNON DUNHAM
Cincinnati, Ohio

Dr. W. D. Haggard, Nashville, has the following honors and more, copied from Who's Who.

Professor of Gynecology and Abdominal Surgery, University of Tennessee, 1899-1912; Professor of Surgery and Clinical Surgery, Vanderbilt University Medical Department since 1913; Surgeon and President Staff St. Thomas Hospital; visiting surgeon Vanderbilt University Hospital.

Fellow American College of Surgeons (Regent 1913-1920; president 1933-1934); American Surgical Association; Society of Clinical Surgery; American Medical Association (Council Medical Education, 1910-1920; chairman Surgical Section, 1917; president, 1924-1925); president Southern Surgical Association.

He will address the Association Wednesday evening on The Management of Goiter and Results in One Thousand Operative Cases.



W. D. HAGGARD, M. D.
Nashville.

## DR. L. E. SMITH

We take pleasure in announcing that Dr. L. E. Smith will be the speaker at the Annual Meeting of the League of Christian Physicians, to be held in connection with the approaching meeting of the Kentucky State Medical Association at Harlan. This meeting will be held in the Methodist Episcopal Church, Harlan, Sunday evening, September 30th.

Dr. Smith is a native of Kentucky—the son of a Presbyterian minister. His boyhood was spent in the rural sections of the State; in early manhood, he moved to Oklahoma and for seven years experienced the hardships of frontier homesteading. Graduating from the University of Kentucky, he entered the Johns Hopkins University School of Medicine, where he received his degree of M. D. He served as medical missionary in San Juan, Porto Rico, for one year, subsequently going to equatorial West Africa, where he served in



DR. L. E. SMITH
Louisville.

a similar capacity for seven years. Since 1929, he has been connected with public health work in Kentucky and is now Executive Secretary of the Kentucky Tuberculosis Association.

All denominations are invited to participate in this meeting, and the public is cordially invited to hear and enjoy Dr. Smith's interpretation of "The Christian Physician" in the role of the modern "Good Samaritan."

Don't miss this meeting.

## SALES TAX

Doctors' bills for professional services are not subject to the sales tax. However, where physicians sell drugs, biologicals, surgical dressings, splints, eye glasses, braces, or other merchandise which they purchase at wholesale prices, they are required to collect a charge of 3 per cent additional for the sales tax. Those of us who have such merchandise for sale should apply to the State Tax Commission, Frankfort, for a license and must keep a daily record of cash collected for such sales. The 3% tax is applicable to gross cash receipts. On the fifteenth day of each month the total of such sales for the preceding month should be added up. Three per cent of this amount should be sent by check or cash to the Sales Tax Commission, Frankfort, after deducting 3 per cent of the tax due, which is retained by the physician to compensate him for keeping the records and collecting the tax.

Where drugs or biologicals are dispensed as a part of the professional service and included in the professional fee, they are not taxable.

Our correspondence indicates that the physicians of the State thoroughly understand the sales tax provision and are practically unanimously supporters of this new form of taxation. It is recognized that this change in the tax base is going to make our whole people conscious of the cost of government and to cause them to more carefully scrutinize expenditures. This will almost necessarily result in improved public service and in greater economy in government. Our profession will be found ready to do its part.

## DOCTOR JAMES BROWN KINNAIRD

Doctor James Brown Kinnaird was born in Lancaster on December 21, 1856. He received his A. B. degree from Center College in 1879 and his M. D. from Bellevue College of Medi-



DR. JAMES BROWN KINNAIRD

cine in New York in 1882. He practiced at Lancaster from 1882 until his death. For many years he was the treasurer of the State Medical Association. From 1888 until his death he was Medical Reference for Garrard County. He had been Orator in Medicine and twice Vice-President of the State Medical Association. He was President of his County Society on several different occasions. He had frequently been a delegate to the State Association.

Few men had more to do with the development of the policies of organized medicine in Kentucky than Doctor Kinnaird. Modest and self-effacing, he was a wise Councilor and a

loyal friend. Few others had the opportunity however, of making greater contributions to the effectiveness of medical organization in Kentucky. He was fortunate that his mantle has been inherited by his son, Doctor Virgil Kinnaird, to whom, and to his devoted wife, the JOURNAL extends the sympathy and affection of the profession of the State.

## A POST-GRADUATE COURSE IN PEDIATRICS

Plans have been outlined for a Post-Graduate Course of Instruction in the Diseases of Children under the auspices of the American Academy of Pediatries. The teaching will be done in the Children's Free Hospital and all interesting cases will be exhibited with all the laboratory findings. The lectures and round table discussions will last from 10 a. m. to 3 p. m with an hour off for lunch. The Course will begin on October 10 and will be continued each Wednesday for ten weeks. A charge of $5.00 will be made for the entire Course. The full programme will be printed in the next issue of the JOURNAL.

In addition to the lectures and the round table discussions, the newer diagnostic and therapeutic measures will be demonstrated, such as blood transfusions, intravenous and intraperitoneal injections, laboratory methods, etc.

Physicians living within a radius of fifty to seventy-five miles of Louisville can reach the city in time for the opening lectures and get back home in time to finish up necessary calls.

I shall be very glad to answer any letters of inquiry and to have suggestions as to special subjects that would be interesting to any of the groups of attending physicians.

PHILIP F. BARBOUR,
State Chairman,
American Academy of Pediatrics.

## RESERVATIONS FOR HARLAN MEETING

The Hotel Committee, which is a sub-committee of the Committee on Arrangements, assures us that adequate provision has been made for housing and feeding all who may attend the Annual Meeting at Harlan. Of this Committee, Dr. M. L. Gunn is Chairman; the other members are Dr. Clark Bailey, Mr. Ben Lewallen and Mr. Albert Lewallen. If you have not already made reservations, applications for accommodations should be forwarded at once to the Chairman or other member of the Committee. The address of each of them is Harlan, Kentucky.

## GIVE THE DOCTOR A CHANCE TO DECIDE

A few years ago, "let your doctor decide," was used by the National Tuberculosis Association as a slogan, around which was centered a nation-wide campaign against Tuberculosis.

Dr. J. Burns Amberson, at the recent annual meeting of the National Tuberculosis Association, in Cincinnati, called attention under the heading "some case finding principles of practical significance," to some reasons why we have failed to control Tuberculosis by working along this line.

Dr. Amberson called attention to some of the weaknesses of our educational and persuasive methods:

"Two-thirds to nine-tenths of patients with early Tuberculosis have no definite or alarming symptoms."

We often forget that symptoms appear after pathology is present. In the light of modern knowledge of Tuberculosis, when pathology, sufficient to be detected by the old methods, appears, the case is no longer an early case.

"The physician will miss detection of a great many early lesions by physical examination unless he also uses x-ray."

We should add to the x-ray the very sensitive, cheap and practical "tuberculin test!" for with tuberculin test and x-ray, cases can be found in the earliest phase of the infective stage when the minimal damage has been done.

"The tendency to postpone treatment until the tubercule bacillus is found in the sputum is dangerous, for by that time the lesion probably has entered the second stage with cavity formation."

These cases who have waited—just to be sure they had Tuberculosis, are the ones who come too late to be cured. They are the spreaders of disease.

We must also bear in mind that severity of symptoms are not always a measure of the duration of the disease. In adolescents and young adults, serious extensions may occur in a short period of time.

The physician is hedged about by a code of medical ethics that prevents him from reaching out into the highways and byways of life and bringing people into his office. He must sit and wait for them to come in. They come when pain, weakness, or some other symptom of sufficient importance to alarm them, interferes with their daily routine. Using the physician to avoid disease is comparatively foreign to the American public.

Those with Tuberculosis, sooner or later will come to the doctor, but they come too late.

Present day case-finding machinery consists of history taking, tuberculin testing,

x-ray (radiography and fluoroscope,) physical examination, laboratory testing, etc.

With this modern case finding equipment in the hands of our physicians, together with sufficient funds and an educated public to back it, Tuberculosis control could be assured within the limits of the present generation.

We want the doctor to decide. In the light of these facts, all up to date physicians should not only be equipped with modern knowledge and equipment, but they should be always ready and willing to lend a hand. If necessary, they should take the lead in promoting and supporting community educational programs that will result in the adoption of definite routine measures designed to search out tuberculous infections and bring them to the doctor that he may decide. Then the physician will come into his legitimate sphere of service, and tuberculosis control programs will be efficiently administered in our State.

## A PATENT MEDICINE EVIL

It has been brought to the attention of the Editor of the JOURNAL that there are still on the market, a number of preparations containing morphine or one of its derivatives sold or recommended for children. The labeling of these preparations bear no therapeutic claims but there is a recommended dosage for children. One of these preparations now known as "Kopp's" was formerly sold as "Kopp's Baby's Friend." In the first edition of "Nostrums and Quackery" published by the A. M. A. there are recorded deaths from the use of this medicine by young children.

If any physician is aware of any authentic reports or recent cases of deleterious effects from the use of this, or any other similar narcotic-bearing patent medicines, the Secretary of the State Medical Association, A. T. McCormack, requests that reports of the cases be sent to him with full detail as soon as possible.

## GREETINGS FROM THE MAYOR OF HARLAN

To the Doctors of Kentucky,
Greeting:

We invite and urge your presence here in Harlan, October 1-4, at the Annual Convention of the Kentucky State Medical Association.

It is our opportunity to be honored with this distinguished gathering at a most delightful season of the year, and when our scenic beauty is at its best.

We want to know you better, we want you to know our country and our people, our problems, our traditions, ideals, ambitions and something of our opportunities. We appreciate the fact that Harlan, her people will be richer, stronger, and wiser, and that we shall have new inspiration by your visit here, and by our contact and association with you.

We extend to you the glad hand of welcome, good fellowship and hospitality.

L. O. SMITH, M. D.
Mayor of Harlan.



Huge rock dropped by some prehistoric giant atop of Pine Mountain.

## PINE MOUNTAIN PARK

No more beautiful spot exists in Kentucky than Pine Mountain Park, where the Mountain Laurel Festival is held each June. Being only a short distance from Pineville, this tour can be made in several hours. The trail passes through two miles of unsurpassed scenery of tall cliffs, around massive boulders and narrow gorges, filled with rhododendron. Chained rock, flag rock and rock hotel are among the scenic wonders.

## OFFICIAL ANNOUNCEMENTS

PRELIMINARY PROGRAM KENTUCKY STATE MEDICAL ASSOCIATION, METHODIST EPISCOPAL CHURCH, HARLAN
OCTOBER 1-4, 1934

### GENERAL MEETINGS

TUESDAY, OCTOBER 2
9:00 A. M.

Call to Order by the President, C. C. Howard, M. D., Glasgow.
Invocation, Pastor Methodist Episcopal Church, Harlan.
Address of Welcome.
Response to Address of Welcome, H. H. Hunt, M. D., Mayfield.
Installation of President.
Memorial by E. D. Turner, M. D,. Cave City.
Report of Committee on Arrangements, W. C. Bailey, Harlan.

TUESDAY, 10:00 A. M.

1. Lead Poison in Children, William Woodward Nicholson, M. D., Louisville.
2. Appendicitis in Children, Wm. Edgar Fallis, M. D., Louisville.
3. Treatment of Diarrhea in Infancy, James W. Bruce, M. D., Louisville.
4. Diagnosis and Treatment of Congenital Pyloric Stenosis, E. S. Allen, M. D., Louisville.

SPECIAL ORDER AT 12:00 M.

ORATION IN MEDICINE

The Mutual Interest of Physicians and Patients, W. J. Shelton, M. D., Mayfield.

TUESDAY, 2:00 P. M.

1. Feeding the Diabetic, L. Lyne Smith, M. D., Louisville.
2. Amebiasis, Frank M. Stites, M. D., Louisville.
3. Treatment of the Tubercular in the Home, J. E. Edwards, M. D., Lancaster.
4. Some Newer Aspects of Arthritis, A. Clayton McCarty, M. D., Louisville.
5. Endocrine, Vitamine and Allergen Relativity, R. Alexander Bate, M. D., Louisville.

TUESDAY, 4:00 P. M.

ROUND TABLES

Surgery, Irvin Abell, M. D., Louisville.
Pediatrics, Philip F. Barbour, M. D., Louisville.
Eye, Ear, Nose and Throat, H. G. Reynolds, M. D., Paducah.
Medicine, Virgil Simpson, M. D., Louisville.

PUBLIC MEETING AT 8:00 P. M.

TUESDAY, OCTOBER 2

President's Address, C. C. Howard, M. D., Glasgow.

WEDNESDAY, OCTOBER 3
8:00 A. M.

1. The Wearing of Glasses—As It Relates to Medicine, Adolph O. Pfingst, M. D., Louisville.
2. The Treatment of Tetanus, E. B. Bradley, M. D., Lexington.
3. Drug Addicts, Thomas J. Crice, M. D., Louisville.
4. Some Further Studies and Observation of Hyperthermia (Fever Treatment); Case Repart, Curran Pope, M. D., Louisville.
5. The Trend of Modern Medicine, C. G. McLean, M. D., Lexington.
6. The Business Side of Medicine, W. B. Atkinson, M. D., Campbellsville.

SPECIAL ORDER AT 12:00 M.

ORATION IN SURGERY

The Fracture Problem—Present and Future Status, I. A. Arnold, M. D., Louisville.

WEDNESDAY, 2:00 P. M.

1. Spinal Cord Tumors, Symptomatology and Differential Diagnosis, Franklin Jelsma, M. D., Louisville.
2. Cancer of the Uterns, Illustrated by Slides and Pathological Specimens, Louis Frank, M. D., Louisville.
3. Some End Results of Plastic Surgery (Moving Picture Demonstration), Francis M. Massie, M. D., Lexington.
4. Study of 100 Cases of Ectopic Pregnancy, W. O. Johnson, M. D., Louisville.

WEDNESDAY, 4:00 P. M.

ROUND TABLES

Surgery, J. H. Blackburn, M. D., Bowling Green.
Medicine, Morris Flexner, M. D., Louisville.
Obstetrics, Edward Speidel, M. D., Louisville.
Orthopedics, W. Barnett Owen, M. D., Louisville.
Laboratory Procedures, L. H. South, M. D, Louisville.

SUBSCRIPTION DINNER AT 6:00 P. M.

For Members of the Association, Wives, Friends and Guests

PUBLIC MEETING AT 8:00 P. M.

Annual Oration, Pulmonary Emphysema, A Sequelae of Pulmonary Tuberculosis, Kennon Dunham, M. D., Cincinnati, Ohio.
Address, The Management of Goiter and Results in One Thousand Operative Cases, With Lantern Slides, Wm. D. Haggard, M. D., Nashville, Tennessee.

THURSDAY, OCTOBER 4
8:00 A. M.

1. Internal Hemorrhoids: Treatment by Non-Surgical Methods, Rufus C. Alley, M. D., Lexington.

2. The Etiology and Surgical Treatment of Anal Fistula, Wm. J. Martin, Jr., M. D., Louisville.
3. A Plea for Better Obstetrics, J. M. English, M. D., Elizabethtown.
4. Chorea in Pregnancy, C. G. Daugherty, M. D., Paris.
5. Laboratory Tests for Pregnancy, Harry M. Weeter, M. D., Louisville.
6. Malignant Tumor of the Thorax and Upper Abdomen, D. Y. Keith, M. D., Louisville.

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## 1934-1935 REFERENCE COMMITTEES OF THE HOUSE OF DELEGATES

COMMITTEE ON CREDENTIALS:
A. M. Leigh, M. D., Louisville, Chairman
F. R. Burton, M. D., Barbourville
O. H. Swango, M. D., Jackson

COMMITTEE ON SCIENTIFIC WORK:
C. C. Howard, M. D., President-Elect, Glasgow, Chairman
A. T. McCormack, M. D., Secretary, Louisville
James H. Pritchett, M. D., Louisville

MEDICO-LEGAL COMMITTEE:
J. B. Lukins, M. D., Louisville, Chairman
Marshall McDowell, M. D., Cynthiana
A. T. McCormack, M. D., Secretary, Louisville

COMMITTEE ON CRIPPLED CHILDREN:
W. M. Brown, M. D., Lexington, Chairman
W. Barnett Owen, M. D., Louisville
Orville R. Miller, M. D., Louisville
C. C. Garr, M. D., Lexington

COMMITTEE ON JOURNAL:
W. Barnett Owen, M. D., Louisville, Chairman
John Rogers, M. D., Henderson
F. M. Sherman, M. D., Owensboro

COMMITTEE ON PUBLIC RELATIONS:
Irvin Abell, M. D., Louisville, Chairman
A. W. Davis, M. D., Madisonville
Claude Youtsey, M. D., Newport
C. C. Howard, M. D., President-Elect, Glasgow
A. T. McCormack, M. D., Secretary, Louisville

COMMITTEE ON MISCELLANEOUS BUSINESS:
H. G. Davis, M. D., Marrowbone, Chairman
C. D. O'Hara, M. D., Williamstown
John B. Wadlington, M. D., Princeton

COMMITTEE ON PUBLICITY:
Wm. Clark Bailey, M. D., Harlan, Chairman
Wm. P. Cawood, M. D., Harlan
H. K. Buttermore, M. D., Liggett

COMMITTEE ON SCIENTIFIC AND COMMERCIAL EXHIBITS:
H. K. Buttermore, M. D., Liggett, Chairman
V. A. Stilley, M. D., Benton
S. C. Smith, M. D., Ashland

COMMITTEE ON MEDICAL EDUCATION:
J. D. Northcutt, M. D., Covington, Chairman
P. H. Stewart, M. D., Paducah
J. D. Farris, M. D., Richmond

COMMITTEE ON PERIODIC HEALTH EXAMINATION:
Oscar O. Miller, M. D., Louisville, Chairman
W. D. Henry, M. D., Crutchfield
W. H. Smith, M. D., Danville

COMMITTEE ON HOSPITAL STANDARDIZATION:
C. G. Daugherty, M. D., Paris, Chairman
W. B. Moore, M. D., Cynthiana
C. C. Howard, M. D., President-Elect, Glasgow

COMMITTEE ON WORKMEN'S COMPENSATION LAW:
Frank P. Strickler, M. D., Louisville, Chairman
A. M. Gross, M. D., Hazard
J. C. Nash, M. D., Coxton
C. G. Forsee, M. D., Louisville
M. D. Flanary, M. D., Pikeville

HEART COMMITTEE:
E. F. Horine, M. D., Louisville, Chairman
R. E. Smith, M. D., Henderson
Austin Bell, M. D., Hopkinsville
Walter Byrne, Jr., M. D., Russellville
John W. Scott, M. D., Lexington
J. Rowan Morrison, M. D., Louisville
W. L. Tyler, M. D., Owensboro

COMMITTEE ON CONTROL OF CANCER:
L. Wallace Frank, M. D., Louisville, Chairman
J. Duffy Hancock, M. D., Louisville
C. A. Vance, M. D. Lexington
E. E. Archer, M. D., Paintsville
A. W. Davis, M. D., Madisonville
Paul Gronnerud, Pikeville

COMMITTEE ON HEALTH PROBLEMS IN EDUCATION:
J. S. Chambers, M. D., Lexington, Chairman
J. D. Farris, M. D., Richmond
Jethra Hancock, M. D., Louisville

COMMITTEE ON COUNTY HOSPITALS:
Paul S. York, M. D., Glasgow, Chairman
W. B. Atkinson, M. D., Campbellsville
J. L. Toll, M. D., Lawrenceburg

COMMITTEE ON MEDICAL ETHICS:
W. I. Hume, M. D., Louisville, Chairman
R. L. Smith, M. D., Henderson
J. W. Scott, M. D., Lexington

AUDITING COMMITTEE:
D. P. Hall, M. D., Louisville, Chairman
J. M. English, M. D., Elizabethtown
R. McMurtry, M. D., Falmouth

COMMITTEE ON RESOLUTIONS:
L. T. Minish, M. D., Frankfort, Chairman
Henry Smith, M. D., Rochester
T. A. Frazer, M. D., Marion

COMMITTEE ON POST-GRADUATE WORK:
Philip F. Barbour, M. D., Louisville, Chairman
R. Julian Estill, M. D., Lexington
R. L. Biltz, M. D., Newport
L. H. South, M. D., Louisville

COMMITTEE ON WOMAN'S AUXILIARY:
Mrs. B. K. Menefee, Covington, Chairman
Mrs. A. T. McCormack, Louisville
Mrs. George A. Hendon, Louisville

COMMITTEE ON McDOWELL MEMORIAL:
C. C. Howard, M. D., President-Elect, Glasgow, Chairman
Louis Frank, M. D., Louisville
Rice Cowan, M. D., Danville

COMMITTEE ON REPORT OF COUNCIL:
W. I. Hume, M. D., Louisville, Chairman
John B. Wadlington, M. D., Princeton
T. J. Potect, M. D., Hodgenville

COMMITTEE ON MILITARY MEDICINE AND MEDICAL VETERANS' AFFAIRS:
E. C. Walter, M. D., Mayfield, Chairman
S. C. Smith, M. D., Ashland
H. E. Prather, M. D., Hickman

COMMITTEE ON PREVENTION OF GOITER:
R. R. Elmore, M. D., Louisville, Chairman
W. I. Hume, M. D., Louisville
P. C. Sanders, M. D., Danville
J. N. Bailey, M. D., Paducah
J. W. York, M. D., Canmer

COMMITTEE ON MEDICAL ECONOMICS:
R. E. Smith, M. D., Henderson, Chairman
W. B. Atkinson, M. D., Campbellsville
A. C. McCarty, M. D., Louisville
P. H. Stewart, M. D., Paducah
J. H. Blackburn, M. D., Bowling Green

COMMITTEE ON PHYSIOTHERAPY:
Virgil E. Simpson, M. D., Louisville, Chairman
Scott Breckinridge, M. D., Lexington
W. T. Briggs, M. D., Lexington
W. M. Brown, M. D., Lexington
Robert L. Biltz, M. D., Newport
H. C. Herrmann, M. D., Louisville
D. Y. Keith, M. D., Louisville
Orville Miller, M. D., Louisville
Lee Palmer, M. D., Louisville
Curran Pope, M. D., Louisville
Fred Rankin, M. D., Lexington
Winston U. Rutledge, M. D., Louisville

## OFFICIAL CALL

### THE EIGHTY-FOURTH ANNUAL MEETING OF THE KENTUCKY STATE MEDICAL ASSOCIATION TO BE HELD AT THE METHODIST CHURCH, HARLAN.

To the Officers and Members of the Component County Societies of the Kentucky State Medical Association.

The Eighty-fourth Annual Meeting of the Kentucky State Medical Association will convene in the Auditorium, Monday, Tuesday, Wednesday and Thursday, October 1, 2, 3, 4, 1934.

#### THE HOUSE OF DELEGATES

The House of Delegates of the Kentucky State Medical Association will convene in the Auditorium at 2 p. m. on Monday, October 1, 1934.

#### FIRST GENERAL SESSION

The First General Session which constitutes the opening exercises of the scientific function of the Association will be held in the Auditorium, Tuesday, October 2, at 9 a. m.

#### THE COUNCIL

The Council will convene in the Auditorium, Monday, October 1, at 10:30 a. m.

#### THE REGISTRATION DEPARTMENT

The Registration Department will be open in the Auditorium, from 10 a. m. to 5 p. m., on Monday, October 1; from 8 a. m. to 5 p. m., on Tuesday and Wednesday October 2, and 3, and from 8 a. m. to 12 m., on Thursday October 4, 1934.

#### COUNCILOR DISTRICTS

FIRST DISTRICT
V. A. Stilley, Benton, Councilor.

| | | |
|---|---|---|
| Ballard | Livingston | Fulton |
| Caldwell | McCracken | Graves |
| Calloway | Marshall | Lyon |
| Carlisle | Trigg | |
| Hickman | Crittenden | |

SECOND DISTRICT
D. M. Griffith, Owensboro, Councilor.

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|---|---|---|
| Daviess | Hopkins | Ohio |
| Hancock | McLean | Union |
| Henderson | Muhlenberg | Webster |

THIRD DISTRICT
C. C. Turner, Glasgow, Councilor.

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| Allen | Cumberland | Simpson |
| Barren | Logan | Todd |
| Butler | Monroe | Warren-Edmonson |
| Christian | Metcalfe | |

FOURTH DISTRICT
J. I. Greenwell, New Haven, Councilor

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|---|---|---|
| Breckinridge | Hardin | Meade |
| Bullitt | Hart | Nelson |
| Grayson | Larue | Spencer |

FIFTH DISTRICT
W. E. Gardner, Louisville, Councilor

| | | |
|---|---|---|
| Carroll | Gallatin | Shelby |
| Oldham | Henry | Trimble |
| Franklin | Jefferson | Owen |

SIXTH DISTRICT
R. C. McChord, Lebanon, Councilor

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| Adair | Green | Taylor |
| Anderson | Marion | Washington |
| Boyle | Mercer | |

SEVENTH DISTRICT
V. G. Kinnaird Lancaster, Councilor

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|---|---|---|
| Casey | Lincoln | Rockcastle |
| Clinton | McCreary | Russell |
| Garrard | Pulaski | Wayne |

EIGHTH DISTRICT
C. W. Shaw, Alexandria, Councilor

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|---|---|---|
| Boone | Grant | Pendleton |
| Bracken | Harrison | |
| Campbell-Kenton | Mason | Robertson |
| Fleming | Nicholas | |

NINTH DISTRICT
S. C. Smith, Ashland, Councilor

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|---|---|---|
| Boyd | Greenup | Martin |
| Carter | Johnson | Magoffin |
| Elliott | Lewis | Pike |
| Floyd | Lawrence | |

TENTH DISTRICT
C. A. Vance, Lexington, Councilor

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|---|---|---|
| Bath | Lee | Rowan |
| Bourbon | Madison | Scott |
| Breathitt | Menifee | Wolfe |
| Clark | Montgomery | Estill |
| Fayette | Powell | Woodford |
| Jessamine | Morgan | |

ELEVENTH DISTRICT
H. K. Buttermore, Liggett, Councilor

| | | |
|---|---|---|
| Bell | Knott | Leslie |
| Clay | Knox | Owsley |
| Harlan | Laurel | Perry |
| Jackson | Letcher | Whitley |

# CONSTITUTION AND BY-LAWS OF THE KENTUCKY STATE MEDICAL ASSOCIATION ADOPTED AT PADUCAH IN 1902 AS AMENDED

## CONSTITUTION

### Article I. Name of the Association

The name and title of this organization shall be the Kentucky State Medical Association.

### Article II. Purpose of the Association

The purpose of the Association shall be to federate and bring into compact organization the entire medical profession of the State of Kentucky, and to unite with similar associations in other states to form the American Medical Association, with a view to the extension of medical knowledge, and to the advancement of medical science, to the elevation of the standard of medical education, and to the enactment and enforcement of just medical laws; to the promotion of friendly intercourse among physicians, and to the guarding and fostering of their material interest and to the enlightenment and direction of public opinion in regard to the great problem of state medicine, so that the profession shall become more capable and honorable within itself, and more useful to the public in the prevention and cure of disease, and in prolonging and adding comfort to life.

### Article III. Component Societies

Component Societies shall consist of those county medical societies which hold charters from this Association.

### Article IV. Composition of the Association

Section 1. This Association shall consist of Members, Delegates and Guests.

Sec. 2. Members. The members of this Association shall be the members of the component county medical societies.

Sec. 3. Delegates. Delegates shall be those members who are elected in accordance with this Constitution and By-laws to represent their respective component county societies in the House of Delegates of this Association.

Sec. 4. Guests. Any distinguished physician not a resident of this State may become a guest during any Annual Session upon invitation of the Association or its Council, and shall be accorded the privileges of participating in all of the scientific work of that session.

### Article V. House of Delegates

The House of Delegates shall be the legislative and business body of the Association, and shall consist of (1) Delegates elected by the component county societies, (2) *ex-officio*, the officers of the Association as defined in Article VIII, Section 1, of this Constitution, and (3) the five immediate past presidents.

### Article VI. Sections and District Societies

The House of Delegates may provide for a division of the scientific work of the Association into appropriate Sections, and for the organization of such Councilor District Societies as will promote the best interest of the profession, such societies to be composed exclusively of members of component county societies.

### Article VII. Sessions and Meetings

Section 1. The Association shall hold an Annual Session, during which there shall be held daily not less than two General Meetings, which shall be open to all registered members, delegates and guests.

Sec. 2. The time and place for holding each annual session shall be fixed by the House of Delegates.

### Article VIII. Officers

Section 1. The officers of this Association shall be a President, three Vice-Presidents, a Secretary, a Treasurer, and eleven Councilors.

Sec. 2. The President and Vice-Presidents shall be elected for a term of one year. The Secretary, Treasurer and Councilors shall be elected for terms of five years each, the Councilors being divided into classes so that two shall be elected each year. All of these officers shall serve until their successors are elected and installed.

Sec. 3. The officers of the Association shall be elected by the House of Delegates on the morning of the last day of the Annual Session but no Delegate shall be eligible to any office named in the preceding section, except that of Councilor; and no person shall be elected to any such office who is not in attendance upon the Annual Session, and who has not been a member of the Association for the past two years.

### Article IX. Funds and Expenses

Funds for meeting the expenses of the As-

sociation shall be arranged for by the House of Delegates by an equal per capita assessment upon each county society to be fixed by the House of Delegates, by voluntary contribution, and from the profits of its publication. Funds may be appropriated by the House of Delegates to defray the expenses of the Annual Session, for publication and for such other purposes as will promote the welfare of the Association and profession.

ARTICLE X. REFERENDUM

The General Meeting of the Association may, by a two-thirds vote, order a general referendum upon any question pending before the House of Delegates, and the House of Delegates may, by a similar vote of its own members, or after a like vote of the General Meeting, submit any such question to the membership of the Association for a final vote; and if the persons voting shall comprise a majority of all the members, a majority of such vote shall determine the question and be binding upon the House of Delegates.

ARTICLE XI. THE SEAL

The Association shall have a common Seal with power to break, change or renew the same at pleasure.

ARTICLE XII. AMENDMENTS

The House of Delegates may amend any article of this Constitution by a two-thirds vote of the Delegates registered at that Annual Session, provided that such amendment shall have been presented in open meeting at the previous Annual Session, and that it shall have been sent officially to each component county society at least two months before the session at which final action is to be taken.

## BY-LAWS

CHAPTER I. MEMBERSHIP

Section 1. All members of the Component County Societies shall be privileged to attend all meetings and take part in all the proceedings of the Annual Session, and shall be eligible to any office within the gift of the Association. PROVIDED, that no physician may become a member of any county society unless he signs and keeps inviolate the following pledge:

I hereby promise upon my honor as a gentleman that I will not so long as I am a member of the Kentucky State Medical Association practice division of fees in any form; neither by collecting fees from others referring patients to me nor by permitting them to collect my fees for me; nor will I make joint fees with physicians or surgeons referring patients to me for operation or consultation; neither will I in any way, directly or indirectly, compensate anyone referring patients to me nor will I utilize any man as an assistant as a subterfuge for this purpose.

Sec. 2. The name of a physician upon the properly certified roster of members, or list of delegates, of a chartered county society which has paid its annual assessment, shall be *prima facie* evidence of his right to register at the Annual Session in the respective bodies of this Association.

Sec. 3. No persons who are under sentence or suspension or expulsion from any component society of this Association, or whose name has been dropped from its roll of membership shall be entitled to any of the rights or benefits of this Association, nor shall he be permitted to take part in any of its proceedings, until such time as he has been relieved of such liability.

Sec. 4. Each member in attendance at the Annual Session shall enter his name on the registration book indicating the component society of which he is a member. When his right to membership has been verified by reference to the roster of the society, he shall receive a badge which shall be evidence of his right to all the privileges of membership at that session. No member or delegate shall take part in any of the proceedings of an annual session until he has complied with the provisions of this section.

CHAPTER II. ANNUAL AND SPECIAL SESSION OF THE ASSOCIATION

Section 1. The Association shall hold a annual session, meeting every third year in the city of Louisville, and the other two years at some point in the State fixed at the preceding annual session.

CHAPTER III. GENERAL MEETING

Section 1. The General Meeting shall include all registered members, delegates and guests, who shall have equal rights to participate in the proceedings and discussions: and except guests, to vote on pending questions. Each General Meeting shall be presided over by the President or in his absence or disability or upon his request, by one of the Vice-Presidents. Before it, at such time and place as may have been arranged, shall be delivered the annual address of the President, and the annual orations and the entire time of the sessions as far as may be, shall be devoted to papers and discussion relating to scientific medicine.

Sec. 2. The General Meeting shall have authority to create committees or commissions for scientific investigation of special interest and importance to the profession and public, and to receive and dispose of reports of the same; but any expense in connection therewith must first be approved by the House of Delegates.

Sec. 3. Except by special vote, the order of exercises, papers and discussions as set

forth in the official program shall be followed from day to day until it has been completed.

Sec. 4. No address or paper before the Association, except those of the President and orators shall occupy more than twenty minutes in its delivery; and no member shall speak longer than five minutes, nor more than once on any subject.

Sec. 5. All papers read before the Association shall be its property. Each paper shall be deposited with the Secretary when read and if this is not done it shall not be published.

### Chapter IV. House of Delegates

Section 1. The House of Delegates shall meet annually at the time and place of the Annual Session of the Association and shall so fix its hours of meeting as not to conflict with the first General Meeting of the Association, or with the meeting held for the address of the President and the annual orations and so as to give delegates an opportunity to attend the other scientific proceedings and discussions so far as is consistent with their duties. But if the business interests of the association and profession require, it may meet in advance or remain in session after the final adjournment of the General Meeting.

Sec. 2. Each component county society shall be entitled to send to the House of Delegates each year one delegate for every twenty-five members, and one for each major fraction thereof, but each county society holding a charter from this Association, which has made its annual report and paid its assessments as provided in this Constitution and By-Laws shall be entitled to one delegate. In case the regularly elected delegate or alternate is unable to attend the annual meeting of the Association, the President of the county society may in writing appoint an alternate, who shall have the rights and privileges of a delegate.

Sec. 3. A majority of the registered delegates shall constitute a quorum and all of the meetings of the House of Delegates shall be open to members of the Association.

Sec. 4. It shall, through its officers, Advisory Council, and otherwise, give diligent attention to and foster the scientific work and spirit of the Association, and shall constantly study and strive to make each Annual Session a stepping stone to further ones of higher interest.

Sec. 5. It shall consider and advise as to the material interest of the profession, and of the public in those important matters wherein it is dependent upon the profession, and shall use its influence to secure and enforce all proper medical and public health legislation, and to diffuse popular information in relation thereto.

Sec. 6. It shall make careful inquiry into the condition of the profession of each county in the State, and shall have authority to adopt such methods as may be deemed most efficient for building up and increasing the interest in such county societies as already exist and for organizing the profession in counties where societies do not exist. It shall especially and systematically endeavor to promote friendly intercourse between physicians of the same locality and shall continue these efforts until every physician in every county of the State who can be made reputable, has been brought under medical society influence.

Sec. 7. It shall encourage post-graduate work in medical centers as well as home study and research and shall endeavor to have the results of the same utilized and intelligently discussed in the county societies. With these ends in view, five years after the adoption of the By-Laws, no voluntary paper shall be placed upon the annual program nor be heard in the Association which has not first been read in the county society of which the author is a member.

Sec. 8. It shall elect representatives to the House of Delegates of the American Medical Association in accordance with the Constitution and By-Laws of that body, in such manner that not more than one-half of the delegates shall be elected in any one year.

Sec. 9. It shall upon application provide and issue charters to county societies organized to conform to the spirit of the Constitution and By-Laws.

Sec. 10. In sparcely settled sections it shall have authority to organize the physicians of two or more counties to be designated by hyphenating the names of two or more counties so as to distinguish them from district and other classes of societies and these societies, when organized and chartered shall be entitled to all the privileges and representation provided herein for county societies, until such counties may be organized separately.

Sec. 11. It may divide the counties of the State into Councilor Districts, and, when the best interests of the Association and profession will be promoted thereby, organize in each district a medical society, to meet midway between the annual session of the Association and members of the chartered county societies and none other shall be members.

When so organized from the presidents of such district societies shall be chosen the Vice-Presidents of this Association and the Presidents of the county societies of the dis-

trict shall be the Vice-Presidents of such district societies.

Sec. 12. It shall have authority to appoint committees for special purposes from among members of the Association who are not members of the House of Delegates, and such committee may report to the House of Delegates in person, and may participate in the debate thereon.

Sec. 13. It shall approve all memorials and resolutions issued in the name of the Association before the same shall become effective.

Sec. 14. It shall present a summary of its proceedings to the last General Meeting of each Annual Session, and shall publish the same in the JOURNAL.

CHAPTER V. ELECTIONS OF OFFICERS

Section 1. All elections shall be by secret ballot, and a majority of the votes cast shall be necessary to elect, provided, however, that when there are more than two nominees the nominee receiving the least number of votes on the first ballot shall be dropped and the balloting continue until an election occurs in like manner.

Sec. 2. Any member known to have directly or indirectly solicited votes for, or sought any office within the gift of this Association shall be ineligible for any office for two years.

Sec. 3. The election of officers shall be the first order of business of the House of Delegates after the reading of the minutes on the morning of the last day of the General Session.

Sec. 4. Nominations for President shall be called for by counties.

CHAPTER VI. DUTIES OF OFFICERS

Section 1. The President shall preside at all meetings of the Association and of the House of Delegates; shall appoint all committees not otherwise provided for; shall deliver annual address at such time as may be arranged; shall give a deciding vote in case of a tie, and shall perform such other duties as custom and parliamentary usage may require. He shall be the real head of the profession of the State during his term of office and so far as practicable, shall visit by appointment, the various sections of the State and assist the Councilors in building up the county societies and in making their work more practical and useful.

Sec. 2. The Vice-President shall assist the President in the discharge of his duties. In the event of his death, resignation or removal the Council shall elect one of the Vice-Presidents to succeed him.

Sec. 3. The Treasurer shall give bond for the trust imposed in him whenever the House of Delegates shall deem it requisite. He shall demand and receive all funds due the association, together with the bequests and donations. He shall, under the direction of the House of Delegates, sell or lease any real estate belonging to the Association and execute the necessary papers, and shall in general subject to such direction, have the care and management of the fiscal affairs of the Association. He shall pay money out of the Treasury only on written order of the President, countersigned by the Secretary; he shall subject his accounts to such examinations as the House of Delegates may order, and he shall annually render an account of his doings and of the state of funds in his hands.

The Council shall be the executive body of the House of Delegates and between sessions shall exercise the powers confered on the House of Delegates by the Constitution and By-Laws.

Sec. 4. The Secretary, acting with the Committee on Scientific Work, shall prepare and issue the program for and attend all meetings of the Association and of the House of Delegates and he shall keep minutes of their respective proceedings in separate record books. He shall charge upon his books the assessments against each component county society at the end of the fiscal year; he shall collect and make proper credits for the same, and perform such other duties as may be assigned to him. He shall be custodian of all record books and papers belonging to the Treasurer, and shall keep account of and promptly turn over to the Treasurer all funds of the Association which come into his hands. He shall provide for the registration of the members and delegates at the Annual Sessions. He shall keep a card index register of all the legal practitioners of the State by counties, noting on each his status in relation to his county society and upon request shall transmit a copy of this list to the American Medical Association for publication. In so far as it is in his power he shall use the printed matter, correspondence and influence of his office to aid the Councilors in the organization and improvement of the county societies and in the extension of the power and usefulness of this Association. He shall conduct the official correspondence, notifying members of meetings, officers of their election, and committees of their appointment and duties. He shall act as secretary of the Committee on Scientific Work. He shall be editor of the KENTUCKY MEDICAL JOURNAL. He shall employ such assistants as may be ordered by the Council or the House of Delegates. He shall annually make a report of his doings to the House of Delegates.

In order that the Secretary may be enabled to give that amount of time to his

duties which will permit of his becoming proficient it is desirable that he shall receive some compensation. The amount of his salary shall be fixed by the House of Delegates.

### Chapter VII. The Council

Section 1. The Council shall hold daily meetings during the annual session of the Associations and at such other times as necessity may require, subject to the call of the Chairman or on petition of three Councilors. It shall meet on the last day of the Annual Session of the Association for re-organization and for the outlining of the work for the ensuing year. At this meeting it shall elect a chairman and secretary and it shall keep a permanent record of its proceedings. It shall through its Chairman, make an annual report to the House of Delegates at such time as may be provided, which report shall include an audit of the account of the Secretary and Treasurer and other agents of this Association, and shall also specify the character and cost of all the publications of the Association during the year, and the amounts of all other property belonging to the Association, or under its control, with such suggestions as it may deem necessary. In the event of a vacancy in any office the Council may fill the same until the annual election.

Sec. 2. Each Councilor shall be organizer, peacemaker and censor for his district. He shall visit each county in his district at least once a year for the purpose of organizing component societies where none exist, for inquiring into the condition of the profession and for improving and increasing the zeal of the county societies and their members. He shall make an annual report of his doings, and of the condition of the profession of each county in his district to each Annual Session of the House of Delegates. The necessary traveling expenses incurred by Councilor in the line of his duties herein imposed may be allowed by the House of Delegates upon a proper itemized statement, but this shall not be construed to include his expense in attending the Annual Session of the Association.

Sec. 3. Collectively the Council shall be the Board of Censors of the Association. It shall consider all questions involving the right and standing of members, whether in relation to other members, to the component societies or to this Association. All questions of an ethical nature brought before the House of Delegates of the General Meeting shall be referred to the Council without discussion. It shall hear and decide all questions of discipline affecting the conduct of members or a county society upon which appeal is taken from the decision of an individual Councilor. Its decision in all such cases shall be final.

Sec. 4. The Council shall have the right to communicate the views of the profession and of the Association in regard to health, sanitation and other important matters to the public and the lay press. Such communications shall be officially signed by the chairman and secretary of the Council, as such.

Sec. 5. The Council shall provide for and superintend the publication and distribution of all proceedings, transactions and memoirs of the Association and shall have authority to appoint such assistants to the editors as it deems necessary. It shall manage and conduct the Kentucky Medical Journal, which is the organ of the Association, and all money received by the Journal, the Council or any officer of the Association, shall be paid to the Treasurer of the Association on the first of each month.

Sec. 6. All reports on scientific subjects and all scientific discussions and papers read before the Association shall be referred to the Kentucky Medical Journal for publication. The editor, with the consent of the Councilor for the District in which he resides may curtail or abstract papers or discussions, and the Council may return any paper to its author which it may not consider suitable for publication.

Sec. 7. All commercial exhibits during the annual session shall be within the control and direction of the Council.

### Chapter VIII. Committees

Section 1. The standing committees shall be as follows:

A Committee on Scientific Work.

A Committee on Public Relations.

A Committee on Medical Education.

A Medico-Legal Committee.

A Committee on Arrangements, and such other committees as may be necessary. Such committees shall be elected by the House of Delegates, unless otherwise provided.

Sec. 2. The Committee on Scientific Work shall consist of three members of which the President-elect shall be a member and Chairman, and the Secretary shall be a member and Secretary, and shall determine the character and scope of the scientific proceedings of the Association, subject to the provisions or the instructions of the House of Delegates or of the Association, or to the provisions of the Constitution and By-Laws. Thirty days previous to each annual session it shall prepare and issue a program announcing the order in which papers, discussions and other business shall be presented which shall be adhered to by the Association as nearly as practicable.

Sec. 3. The Committee on Public Relations shall consist of three members and the President and Secretary. Under the direction of the House of Delegates it shall represent the Association in securing and enforcing legislation in the interest of the public health and scientific medicine. It shall keep in touch with the profession and public opinions, shall endeavor to shape legislation so as to secure the best results for the whole people, and shall utilize every organized influence in local, state and national affairs and elections. Its work shall be done with dignity becoming a great profession and with that wisdom which will make effective its work and influence. It shall have authority to be heard before the entire Association upon questions of great concern at such times as may be arranged during the annual session.

Sec. 4. The Committee on Arrangements shall consist of the component society in the territory in which the annual session is to be held. It shall by committees of its own selection, provide suitable accommodations for the meeting-places of the Association and of the House of Delegates, and of their respective committees and shall have general charge of all arrangements. Its Chairman shall report an outline of the arrangements to the Secretary for publication in the program and shall make additional announcements during the session as occasion may require.

Sec. 5. The Medico-Legal Committee shall consist of three members, one of whom, the Chairman, shall be elected by the Council for five years, and the Secretary and Treasurer shall be the other two members *ex-officio*. This committee shall select and fix the compensation for an attorney, who shall act as General Counsel, and if required, additional local counsel. The Association though this Committee shall defend its members who are in good standing against unjust suits for malpractice.

### Chapter IX. Assessments and Expenditures

Section 1. The assessment of five dollars per capita on the membership of the component societies is hereby made the annual dues of this Association. The Secretary of each county society shall forward its assessment together with its roster of all officers and members, lists of delegates, and list of non-official physicians of the county to the Secretary of this Association on the first day of January in each year.

Sec. 2. Any county society which fails to pay its assessments, or make the report required, on or before the first day of April in each year, shall be held as suspended, and none of its members or delegates shall be permitted to participate in any of the business or proceedings of the Association or of the House of Delegates until such requirements have been met.

Sec. 3. All motions or resolutions appropriating money shall specify a definite amount, or so much thereof as may be necessary for the purpose indicated, and must be approved by the Council and House of Delegates.

### Chapter X. Rules of Conduct

The Principles set forth in the Principles of Ethics of the American Medical Association shall govern the conduct of members in their relation to each other and to the public.

### Chapter XI. Rules of Order

The deliberations of this Association shall be governed by parliamentary usage as contained in Roberts Rules of Order, unless otherwise determined by a vote of its respective bodies.

### Chapter XII. County Societies

Section 1. All county societies now in affiliation with the State Association or those that may hereafter be organized in this State, which have adopted principles of organization not in conflict with this Constitution and By-Laws shall upon application to the House of Delegates, receive a charter from and become a component part of this Association.

Sec. 2. As rapidly as can be done after the adoption of this Constitution and By-Laws, a medical society shall be organized in every county in the State in which no component society exists, and charters shall be issued thereto.

Sec. 3. Charters shall be issued only upon approval of the House of Delegates and shall be signed by the President and Secretary of this Association. The House of Delegates shall have authority to revoke the charter of any component county society whose actions are in conflict with the letter or spirit of this Constitution and By-Laws.

Sec. 4. Only one component medical society shall be chartered in any county. Where more than one county society exists friendly overtures and concessions shall be made with the aid of the Councilor of the District if necessary and all of the members brought into one organization. In case of failure to unite, an appeal may be made to the Council, which shall decide what action shall be taken.

Sec. 5. Each county society shall judge of the qualifications of its own members, but as such societies are the only portals to this Association, every reputable and legally registered physician who is practicing, or who will agree to practice non-sectarian medicine shall be entitled to membership. Before a

charter is issued to any county society, full and ample notice and opportunity shall be given to every physician in the county to become a member.

Sec. 6. Any physician who may feel aggrieved by the action of the society of the county in refusing him membership, or in suspending or expelling him, shall have the right to appeal to the Council, which upon a majority vote may permit him to become a member of an adjacent county society.

Sec. 7. In hearing appeals, the Council may admit oral or written evidence as in its judgment will best and most fairly present the facts, but in case of every appeal, both as a board and as individual councilors in district and county work, effort at conciliation and compromise shall precede all such hearings.

Sec. 8. When a member in good standing in a component society moves to another county in the State, his name, upon request, shall be transferred without cost to the roster of the county society into whose jurisdiction he moves.

Sec. 9. A physician living in or near a county line may hold membership in that county most convenient for him to attend, on permission of the society in whose jurisdiction he resides.

Sec. 10. Each county society shall have general direction of the affairs of the profession in the county, and its influence shall be constantly exerted for bettering the scientific, moral and material conditions of every physician in the county; and systematic efforts shall be made by each member, and by the society as a whole, to increase the membership until it embraces every qualified physician in the county.

Sec. 11. Frequent meetings shall be encouraged, and the most attractive programs arranged that are possible. The younger members shall be especially encouraged to do post-graduate and original research work, and to give the society the first benefit of such labors. Official position and other preferences shall be unstintingly given to such members.

Sec. 12. At the time of the annual election of officers each county society shall elect a delegate or delegates to represent it in the House of Delegates of this Association in the proportion of one delegate to each twenty-five members or major fraction thereof, and the secretary of the society shall send a list of such delegates to the Secretary of this Association at least sixty days before the Annual Session.

Sec. 13. The Secretary of each county society shall keep a roster of its members and a list of the non-affiliated registered physicians of the county, in which shall be shown the full name, address, college and date of graduation, date of license to practice in this State, and such other information as may be deemed necessary. He shall furnish an official report containing such information, upon blanks supplied him for the purpose, to the Secretary of this Association, on the first day of January of each year, or as soon thereafter as possible, and at the same time that the dues accruing from the annual assessment are sent in. In keeping such roster the Secretary shall note any changes in the personnel of the profession by death, or by removal to or from the county, and in making his annual report he shall be certain to account for every physician who has lived in the county during the year.

Sec. 14. The Secretary of each county society shall report to the Kentucky Medical Journal full minutes of each meeting and forward to it all scientific papers and discussions which the society shall consider worthy of publication.

### Chapter XII. Amendments

These By-Laws may be amended by any Annual Session by a two-thirds vote of all the delegates present at that session, after the amendment has been laid on the table for one day.

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## CONSTITUTION AND BY-LAWS FOR COUNTY SOCIETIES

Prepared by the Committee on Organization of the American Medical Association of which the late Dr. J. N. McCormack was Chairman

### Article I. Name and Title of the Society

The name and title of this organization shall be the ———— County Medical Society.

### Article II. Purpose of the Society

The purpose of this society shall be to bring into one organization the physicians of ————County, so that by frequent meetings and full and frank interchange of views they may secure such intelligent unity and harmony in every phase of their labor as will elevate and make effective the opinions of the profession in all scientific, legislative, public health, material and social affairs, to the end that the profession may receive that respect and support within its own ranks and from the community to which its honorable history and great achievements entitle it; and with other county societies to form the ————
State Medical Association, and through it, with other state associations, to form and maintain the American Medical Association.

ARTICLE III. ELIGIBILITY

Every legally registered physician residing and practicing in ———— County who is of good moral and professional standing and who does not support or practice, or claim to practice, any exclusive system of medicine, shall be eligible for membership.

ARTICLE IV. MEETINGS

Regular meeting shall be held at such time and place as may be determined by the Society.

Special meetings may be called by the President and shall be called on a written request of five members. A call for a special meeting shall state the object of such meeting, at which no business except that stated in the call shall be transacted.

ARTICLE V. OFFICERS

The officers of this Society shall consist of a President, Vice-President, Secretary, Treasurer, Delegates and Board of three Censors. These officers, except the Delegates and Board of Censors, shall be elected annually. Delegates shall be elected for two years, and in accordance with the constitution and by-laws of the state association. One member of the Board of Censors shall be elected each year to serve for three years, provided that at the first election after the adoption of this constitution one member of the Board shall be elected for one year, one for two, and one for three years.

ARTICLE VI. FUNDS AND EXPENSES

Funds for meeting the expenses of the Society shall be raised by annual dues, special assessments and voluntary contributions. Funds may be appropriated by vote of the Society for such purposes as will promote its welfare and that of the profession.

ARTICLE VII. CHARTER

The Society shall apply to the council of the state association for a charter at the meeting at which this constitution and by-laws is adopted, or as soon thereafter as practicable, and the charter shall be kept by the Secretary.

ARTICLE VIII. INCORPORATION

The Society shall have authority to appoint a Board of Trustees and to provide for articles of incorporation whenever it may deem this necessary.

ARTICLE IX. AMENDMENTS

The Society may amend any article of this constitution by a two-thirds vote of its members at any regular meeting, provided that such amendment or amendments are not in conflict with the laws and regulations of the state association; provided, also, that such amendment shall have been read in open session at a previous regular meeting and shall have been sent by mail to each member ten days in advance of the meeting at which final action is to be taken.

BY-LAWS

CHAPTER I. MEMBERSHIP

Section 1. The Society shall judge of the qualification of its members, but as it is the only door to the state medical association and to the American Medical Association for physicians within its jurisdiction, every reputed and legally qualified physician of ————County who does not support or practice or claim to practice, sectarian medicine shall be eligible to membership.

Sec. 2. A candidate for membership shall make application in writing and shall state his age, his college and date of graduation, the place in which he has practiced, and the date of registration in this state. The application must be accompanied by the admission fee and must be endorsed by two members of this Society. It shall be referred to the Board of Censors, who shall inquire into the standing of the applicant, assure themselves that he or she is duly registered according to the laws of the state, and report at the next regular meeting of this Society. Election shall be by ballot, and two-thirds of the votes of the members present and voting shall be necessary to elect. The application shall be returned to the Secretary, who shall file it for future reference. Applications for membership from rejected candidates shall not be received within six months of such rejection.

Sec. 3. A physician, accompanying his application with a transfer card from another component county society of this or any state within 60 days of the issuance of said card, shall be admitted without fee on a majority vote of the members present, and without the application being referred to the Board of Censors. Such application may be acted on at the meeting at which it is presented on the vote of three-fourths of the members present, otherwise it shall lie over until the next regular meeting. No annual dues for the current year shall be charged against such members provided the same have been paid to the Society from which the applicant comes.

Sec. 4. A physician residing in an immediately adjoining county may become a member of this Society in like manner and on the same terms as a physician living in this county, on permission of the county society of the county in which the applicant lives.

Sec. 5. A member in good standing who is free from all indebtedness to this Society, and against whom no charges are pending wishing to withdraw, shall be granted a transfer card. This card shall state the date the member associated himself with the So-

ciety, the date of issuance of the card, and shall be signed by the President and Secretary. It shall be accompanied with a copy of the application presented at the time the member joined the Society, for information to the Society to which the member desires to attach himself.

Sec. 6. All members shall be equally privileged to attend all meetings and take part in all proceedings, and shall be eligible to any office or honor within the gift of the Society so long as they conform to this constitution and by-laws, including the payment of dues. A member who is under sentence of suspension or expulsion shall not be permitted to take part in any of the proceedings or be eligible to any office until relieved of such disability. And, provided further, that none of the privileges of membership shall be extended to any person not a member of this Society except on a majority vote of the Society in regular meeting.

Sec. 7. A member who is guilty of a criminal offense or of gross misconduct either as a physician or as a citizen, or who violates any of the provisions of this constitution and by-laws, shall be liable to censure, suspension or expulsion. Charges against a member must be made in writing and be delivered to the Secretary, who shall immediately furnish a copy to the accused and to the Chairman of the Board of Censors. The Board of Censors shall investigate the charges on their merits, but no action shall be taken by the Board within ten days of the presentation of the charges to the accused, nor before giving the accused and accusers ample opportunity to be heard. The board shall report (1) that the charges are not sustained; or (2) that the charges are sustained and that the accused be (a) censured; (b) suspended for a definite time, or (c) expelled. Censure or suspension shall require a two-thirds vote of the members present and voting and a three-fourths vote of those present and voting shall be required to expel a member. No action shall be taken by the Secretary in such cases until at least six weeks have elapsed since the filing of the charges. A member suspended for a definite time shall be reinstated at the expiration of the time.

Sec. 8. Kindly efforts in the interest of peace, conciliation or reformation, so far as possible and expedient, shall precede the filing of formal charges affecting the character or standing of a member, and the accused shall have opportunity to be heard in his own defense in all trials and proceedings of this nature.

Sec. 9. Members expelled from this Society for any cause shall be eligible for membership after one year from date of expulsion and on the same terms and in like manner as original applicants.

CHAPTER II. POWERS AND DUTIES

Section 1. This Society shall have general direction of the affairs of the medical profession of the county, and its influence shall be constantly exerted to better the scientific, material and social condition of every physician within its jurisdiction. Systematic efforts shall be made by each member, and by the Society as a whole, to increase the membership until it embraces every reputable physician in the county.

Sec. 2. A meeting shall be held at ——— p. m. on the ——————— in each month (or oftener), ——— members shall constitute a quorum.

The officers and committee on program shall profit by experience and by example of other similar societies, and strive to arrange for the most attractive and successful proceedings for each meeting. Crisp papers and discussions and reports of cases shall be arranged for and encouraged, and tedious and profitless proceedings and discussions shall be avoided as far as practicable.

Sec. 3. Agreements and schedules for fees shall not be made by this Society, but at least one meeting during each year shall be set apart for a discussion of the business affairs of the profession of the county, with the view of adopting the best methods for the guidance of all. In all proper ways the public shall be taught that business methods and prompt collections are essential to the equipment of the modern physician and surgeon and that it suffers even more than the profession when this is not recognized.

Sec. 4. This Society shall endeavor to educate its members to the belief that the physician should be a leader in his community, in character, in learning, in dignified and manly bearing, and in courteous and open treatment of his brother physicians, to the end that the profession may occupy that place in its own and the public estimation to which it is entitled.

CHAPTER III. OFFICERS

Section 1. The Officers of the Society shall be elected at the December meeting in each year, which shall be known as the annual meeting. Nominations shall be made by informal ballot, and all elections be by ballot. The vote of the majority of all the members present shall be necessary to an election.

Sec. 2. The President shall preside at the meetings of the Society, and perform such other duties as custom and parliamentary usage may require. He shall be the real head of the profession in the county during the year, and it shall be the pride and ambition to leave it in better condition as regards

both scientific attainments and harmony than at the beginning of his term of office.

Sec. 3. The Vice-President shall assist the President in the performance of his duties, shall preside in his absence, and on his death, resignation or removal from the county, shall succeed to the presidency.

Sec. 4. The Secretary shall record the minutes of the meetings and receive and care for all records and papers belonging to the Society, including its charter. He shall notify each member of the Society as to the time and place of each meeting, and, whenever possible, give the program for the meeting. He shall keep account of and promptly turn over to the Treasurer all funds of the Society which may come into his hands. He shall make and keep a list of the members of this Society in good standing, noting of each his correct name, address, place and date of graduation, and the date of the certificate entitling him to practice medicine in this state; and in a separate list he shall note the same facts in regard to each legally qualified physician in this county not a member of this Society. It shall be his duty to send a copy of such lists, on blank forms furnished him for that purpose, to the Secretary of the state association at such times as may be designated by the state association. In making such lists he shall endeavor to account for each physician who has moved into or out of the county during the year, stating when possible, both his present and past address. At the same time, and with his report of such lists of members and physicians, he shall transmit to the state association his order on the Treasurer for the annual dues of the Society.

Sec. 5. The Treasurer shall receive all dues and money belonging to the Society from the hands of the Secretary or members, and shall pay out the same only on the written orders of the President, countersigned by the Secretary.

Sec. 6. The Delegates shall attend and faithfully represent the members of this Society and the profession of this county in the House of Delegates of the state association, and shall make a report of the proceedings of that body to this Society at the earliest opportunity.

### Chapter IV. Committees

Section 1. There shall be a Board of Censors as provided in the constitution, a Standing Committee on Program and Scientific Work, a Committee on Public Health and Legislation, and such special committees as may from time to time be deemed necessary.

Sec. 2. Board of Censors. This Board shall examine and report on the qualification of applicants for membership subjecting each applicant to such examination as it may deem necessary. It shall investigate charges preferred against a member, and report its conclusions and recommendations to the Society. In case of the absence of a member of the Board, the President may appoint some member to fill the vacancy. The senior member of the Board in point of service shall be Chairman of the Board.

Sec. 3. Committee on Program and Scientific Work. This Committee shall consist of the President, Vice-President and Secretary. It shall be the duty to promote the scientific and social functions of the Society by arranging attractive programs for each meeting and by urging each member to take part in the scientific work. It shall stimulate fraternalism and good feeling among the members in every way possible. (Provisions should be made in this Section for annual luncheons, dinners, etc., which the Committee believes to be an excellent way to bring members together. Such occasions should be made as inexpensive as possible).

Sec. 4. Committee on Public Health and Legislation. This committee shall consist of three members who shall be appointed annually by the President. It shall be its duty to enforce and support the sanitary and medical laws of the state in this county, to co-operate with the Committee on Public Policy and Legislation of the state association in all matters pertaining to legislation, and to prosecute quacks and medical pretenders in this county.

### Chapter V. Funds and Expenses

Section 1. The admission fee, which must accompany the application, shall be $——— and shall include the annual dues for the fiscal year. The admission fee shall be returned if the applicant is not accepted.

Sec. 2. The annual dues shall be $——— and shall be payable on January 1 of each year. Any member who shall fail to pay his annual dues by April 1 shall be held as suspended without action on the part of the Society. A member suspended for non-payment of dues shall be restored to full membership on payment of all indebtedness. Members more than one year in arrears shall be dropped from the roll of members.

Sec. 3. The fiscal year of this Society shall be from January to December, inclusive.

### Chapter VI. Order of Business

The order of business shall be as follows:

1. Call to order by the President.
2. Reading of the minutes of last meeting.
3. Clinical cases.
4. Papers and discussions.
5. Unfinished business.
6. Miscellaneous business.
7. Announcements.
8. Adjournment.

### Chapter VII. Rules of Order

The deliberations of this Society shall be governed by parliamentary usage as contained in Roberts' Rules of Order, unless otherwise determined by vote.

CHAPTER VIII. THE PRINCIPLES OF MEDICAL ETHICS

The Principles of Medical Ethics of the American Medical Association shall govern this Society.

CHAPTER IX. AMENDMENTS

These by-laws may be amended at any regular meeting by a two-thirds vote of, provided that such amendment has been read in open session at the preceding regular meeting and a copy of the same has been sent to each member by the Secretary ten days in advance of the meeting at which final action is to be taken.

## REPORT OF BUSINESS MANAGER

Following the usual policy of the JOURNAL, every article received from members of the Association has been published with the exception of the material that will appear in the October JOURNAL following the meeting.

Material for the JOURNAL includes original articles, society proceedings, verbatim reports of the House of Delegates and Scientific Sections, Forum, News Items and Index, Book Reviews.

The Association furnished a stenographer for the annual meeting for the Eye, Ear, Nose and Throat Section and the entire proceedings are published in each August Issue of the JOURNAL. These papers are always of great value to the general practitioner.

The following figures give a detailed summary of the contents of the JOURNAL. Noting carefully the figures it is evident that the advertising pages have decreased in 1934 while the reading matter has been increased 35 pages.

TABLE I.

| | 1933 | 1934 |
|---|---|---|
| Editorials | 54 | 47 |
| Scientific Editorials | 5 | 3 |
| Official Announcements | 11 | 20 |
| Original Articles | 115 | 126 |
| County Society Reports | 64 | 81 |
| Pages of Reading Matter | 599 | 634 |
| Pages of Advertising | 226 | 262 |

OUR ADVERTISERS

The income from the JOURNAL has been reduced because many advertisers have merged into other firms or have gone out of business, many have curtailed their space or advertising in alternate issues. The Association has assumed the loss in the past year and will continue to do so until business improves. Much financial aid can be given if every reader of the JOURNAL will give careful attention to the advertising pages, and specify the products where practical of those firms in these columns. A letter written to these firms commenting on their products will encourage our advertisers, whether or not the article is purchased. All the space of our technical exhibit has been taken, these firms give a post graduate demonstration in new drugs, books physical therapy apparatus, biologics.

THE EXTENSION COURSE

Under the direction of the Chairman, Dr. Philip F. Barbour, the office of the business manager has arranged programs, notified speakers, and set up letters for 14 meetings and notified members in 51 different counties. More details of this work will be given by the Chairman at the annual meeting.

LEAGUE OF CHRISTIAN PHYSICIANS

The League was organized in 1932 and held its first meeting at the Warren Memorial Church on Sunday evening preceding the general session. Dr. Howard A. Kelly, America's most famous surgeon and Christian physician spoke, the spacious auditorium of the magnificent church was filled. Twenty-four churches united in this service, the meeting was presided over by the President, Dr. Philip F. Barbour.

The next meeting was held in the Christian Church in Murray, every church uniting and although the weather was extremely hot, there were no vacant pews. The speaker was Dr. L. E. Smith, Executive Secretary, Kentucky Tuberculosis Association. He has been requested to again speak at the Methodist Episcopal Church, Harlan, September 30 at 7:30 P. M.

The object of the League is to bring to the people of Kentucky the ideals of Medicine.

COUNTY SOCIETIES

More reports have been published and more meetings have been held during this year than in any previous four years.

The Jefferson County Medical Society meets the second and fourth Monday in each month, continuing the policy inaugurated by Dr. E. F. Horine. Dr. W. I. Hume, President of the Society has issued a standing invitation to every member in the State to attend these meetings, when in Louisville. The programs are published a month in advance for the benefit of the out of town physicians.

Invitations have been given to each County Society to visits the Cancer and Birth Control Clinics at Norton Infirmary and the Cancer Clinic at St. Joseph's Hospital.

TECHNICAL EXHIBITORS

The following firms have taken exhibit space and they have been assigned to the first floor in the registration department. Ample space has been reserved as a recreation space,

where doctors can meet their friends while visiting the exhibitors. As the commercial firms pay the expenses of the meeting, we hope each member will spend ample time viewing their products.

EXHIBITORS

The Dry Milk Company, Inc., New York, N. Y.

General Electric X-Ray Corporation, Cincinnati, Ohio.

Gerber Products Company, Fremont, Michigan.

The Gilliland Laboratories, Inc., Marietta, Pa.

The Medical Protective Company, Wheaton, Ill.

Mellins's Food Company, Boston, Mass.

The Max Wocher & Son Co., Cincinnati, Ohio.

The JOURNAL is gradually recovering from the blow of the depression and has served the physicians as medium of expression and through a systematic mailing system at some time during the year reaches the offices of every licensed physician in Kentucky.

Respectfully submitted,
L. H. SOUTH.

## AUDITOR'S REPORT

To the Council of the Kentucky State Medical Association:

Gentlemen:

Upon request, I have made a complete audit of the books and accounts of your Secretary, Dr. A. T. McCormack, and your Treasurer, Dr. M. McDowell, for the period beginning September 1, 1933 and ending September 1 1934.

All receipts were properly accounted for and all disbursements were charged to the proper accounts being in the form of a voucher check signed by the proper officers bearing the endorsement of the payee.

The various exhibits herewith submitted set forth in detail the financial transactions from every angle and show the true condition of your affairs at this date. I was unable to find an error in your records.

I have also examined the records of Mrs. Edna R. Kreiger, Treasurer of the Woman's Auxiliary, and Business Manager of "The Quarterly" from July 20 to December 31, 1933 and Mrs. Peter Guntermann, Business Manager, from January 1 to July 30, 1934, and find them correct as set forth in the schedule herewith submitted.

Respectfully,
B. P. EUBANK.

Reconciliation of Treasurer's accounts for period September 1, 1933 to September 1, 1934, viz.:

| | | | |
|---|---|---|---|
| Balance on hand at last report | | $7,883.09 | |
| Less Vouchers then outstanding | | 2,457.99 | |
| Balance agreeing with Secretary's last report | | | $ 5,425.10 |
| Amount received from Secretary for period | | 13,840.87 | |
| Amount received from Interest on Bonds and Savings | | 449.06 | 14,289.93 |
| Total | | | $19,715.03 |
| DISBURSEMENTS | | | |
| Expense | | $15,723.57 | |
| Balance September 1, 1934 Checking Account | $3,542.40 | | |
| Additional Balance September 1, 1934 in Savings Account | 449.06 | 3,991.46 | $19,715.03 |

| | | | |
|---|---|---|---|
| Balance September 1, 1934, Checking Account | | | $ 3,542.40 |
| Reconcilement: | | | |
| Balance in the National Bank of Cynthiana, Cynthiana, Kentucky, Treasurer's Account | | $ 6,297.87 | |
| Vouchers Outstanding, viz: | | | |
| No. 130 July 31 1930— | | | |
| Louis Vissman | $ 20.10 | | |
| No. 118 June 30, 1934— | | | |
| Elva Grant | 75.00 | | |
| No. 120 June 30, 1934— | | | |
| Clarence Neighbors, P. M. | 50.00 | | |
| No. 126 July 31, 1934— | | | |
| A. T. McCormack, M. D. | 438.05 | | |
| No. 127 July 31, 1934— | | | |
| L. H. South, M. D. | 90.00 | | |
| No. 128 July 31, 1934— | | | |
| J. F. Blackerby | 90.00 | | |
| No. 129 July 31, 1934— | | | |
| Elva Grant | 75.00 | | |
| No. 130 July 31, 1934— | | | |
| L. R. Curtis Attorney | 150.85 | | |
| No. 131 July 31, 1934— | | | |
| Philip F. Barbour, M. D. | 5.40 | | |
| No. 132 July 31, 1934— | | | |
| Bush-Krebs Co. | 8.04 | | |
| No. 133 July 31, 1934— | | | |
| Brakmeier Bros. | 130.00 | | |
| No. 134 July 31, 1934— | | | |
| Railway Express Agency | 3.27 | | |
| No. 135 July 31, 1934— | | | |
| Louisville Postmaster | 177.01 | | |
| No. 136 July 31, 1934— | | | |
| Woman's Auxiliary, Kentucky State Medical Association | 14.91 | | |
| No. 137 July 31, 1934— | | | |
| Times-Journal Pub. Co. | 536.94 | | |
| No. 137-A July 31 1934— | | | |
| Harry S. Smith | 47.00 | | |
| No. 138 Aug. 31, 1934— | | | |
| A. T. McCormack, M. D. | 135.00 | | |
| No. 139 Aug. 31, 1934— | | | |
| L. H. South, M. D. | 90.00 | | |
| No. 140—Aug. 31, 1934 | | | |
| J. F. Blackerby | 90.00 | | |
| No. 141 Aug. 31, 1934— | | | |
| Elva Grant | 75.00 | | |
| No. 142 Aug. 31, 1934— | | | |
| Mayme Sullivan | 3.90 | | |
| No. 143 Aug. 31, 1934— | | | |
| Times-Journal Pub. Co. | 450.00 | $2,755.47 | |
| Balance agreeing with Secretary | | | $3,542.40 |

Vouchers Nos. 138, 139, 140, 141, 142 and 143 are in the hands of the Secretary to be delivered.

STATEMENT OF ASSETS

| | | |
|---|---|---|
| Balance in the National Bank of Cynthiana, Cynthiana, Kentucky, to the credit of the Kentucky State Medical Association M. McDowell, M. D., Treasurer (Checking Account) | $6,297.87 | |
| Less Vouchers Outstanding | 2,755.47 | |
| | | $3,542.40 |
| Savings Account | $7,250.04 | |
| Interest on Bonds | 222.57 | |
| Interest on Savings | 226.49 | 7,699.10 |
| Kentucky State Medical Ass'n. Student Loan Fund Account | 21.84 | |
| Interest on Loan Fund | .65 | 22.49 |
| Total Amount in Bank | | $11,263.99 |

| | | |
|---|---|---|
| Louisville Title Bonds, Nos. 3, 5 8, 13, and 40, @ $1,000.00 each, in hands of Treasurer deposited in the National Bank of Cynthiana, Cynthiana, Kentucky | $5,000.00 | |
| Office Furniture, etc. (See Exhibit "D") | 782.43 | 5,782.43 |
| hibit "D") | 782.43 | 5,782.43 |

## EXHIBIT "A"

### RECEIPTS

| | | |
|---|---|---|
| Dues from County Societies | $8,430.18 | |
| Income of Journal (Exclusive of Investments, etc.) | 5,410.69 | |
| Student Loan Fund | 22.49 | |
| Interest on Savings Account | $226.49 | |
| Interest on Louisville Title Bonds Nos. 3, 5, 8 and 40 | 222.57 | 449.06 |
| Total Receipts | | $14,312.42 |
| Balance on hand September 1, 1933, Checking Account | 5,425.10 | |
| Balance on hand September 1 1933, Savings Account | 7,250.04 | |
| Total | | $26,987.56 |

### DISBURSEMENTS

| | | |
|---|---|---|
| STATE MEDICAL ASSOCIATION: | | |
| President's Sundries | $ 34.84 | |
| Secretary's Salary | 1,620.00 | |
| Secretary's Stenographer's Salary | 900.00 | |
| Secretary's Sundries | 986.75 | |
| Treasurer's Bond and Expense | 12.50 | |
| Officers', Councilors' and Committee Expenses | 248.74 | |
| Committee on Public Policy, Expense | 1,111,60 | |
| Attorney's Fees, Medico-Legal Committee | 850.00 | |
| Costs and Expenses Medico-Legal Committee | 20.76 | |
| Equipment | 175.70 | |
| Postage and Stamped Envelopes | 449.91 | |
| Association Sundries | 188.77 | |
| Return of Dues | 5.00 | |
| Murray Meeting Expense | 933.74 | |
| Harlan Meeting Expense | 25.75 | |
| Medical Pioneers' Program Expense | 133.50 | |
| Eye, Ear, Nose and Throat Section Expense | 53.00 | |
| Telephone and Telegrams | 31.43 | |
| Tax: $ .40 2.48 | 2.88 | |
| Total State Medical Association | | $7,784.87 |
| KENTUCKY MEDICAL JOURNAL: | | |
| Business Manager's Salary | $1,011.00 | |
| Business Manager's Sundries | 12.50 | |
| Journal Advertisement Collections Paid Woman's Auxiliary, Kentucky State Medical Association | 14.91 | |
| Journal Printing | 6,261.50 | |
| Journal Postage | 150.00 | |
| Journal Express and Freight | 51.34 | |
| Journal Sundries | 421.81 | |
| Sales Tax | 15.64 | |
| Total Journal | | $7,938.70 |
| Grand Total | | $15,7-3.57 |
| Balance on hand this date, Checking Account | $3 542.40 | |
| Balance on hand this date, Savings Account | 7,699.10 | |
| Balance on hand, Stndent Loan Fund | 22.49 | $11,263.99 |
| Total | | $26,987.56 |

## EXHIBIT "B"

### STUDENT LOAN FUND

| | | | | |
|---|---|---|---|---|
| 1930 | | | | |
| Sept. | 1 | Total Receipts on hand | $264.00 | |
| 1931 | | | | |
| Jan. | 1 | Interest | 5.28 | |
| | | Total | $269.28 | |
| Feb. | 10 | Loan for Medical Education | 250.00 | |
| Sept. | 1 | Balance on hand | 19.28 | |
| 1932 | | | | |
| July | 5 | Interest | 1.94 | |
| | | Balance on hand | $ 21.22 | |
| 1933 | | | | |
| July | 5 | Interest | .62 | |
| | | Balance on hand | $ 21.84 | |
| 1934 | | | | |
| July | 5 | Interest | .65 | |
| Aug. | 1 | Balance on hand | | $ 22.49 |

## EXHIBIT "C"

Detailed list of receipts from County Societies from September 1933 to September 1934, compared with incomes of same period last year:

| | 1933 | 1934 |
|---|---|---|
| Adair | $ 25.00 | $ 50.00 |
| Allen | 35.00 | 35.00 |
| Anderson | 45.00 | 40.00 |
| Ballard | 30.00 | 35.00 |
| Barren | 80.00 | 80.00 |
| Bath | 25.00 | 55.00 |
| Bell | 105.00 | 100.00 |
| Boone | 10.00 | 15.00 |
| Bourbon | 75.00 | 75.00 |
| Boyd | 180.00 | 180.00 |
| Boyle | 55.00 | 60.00 |
| Bracken | 25.00 | 50.00 |
| Breathitt | 45.00 | 40.00 |
| Breckenridge | 25.00 | 40.00 |
| Bullitt | 20.00 | 20.00 |
| Butler | 10.00 | 10.00 |
| Caldwell | 45.00 | 50.00 |
| Calloway | 80.00 | 75.00 |
| Campbell Kenton | 465.00 | 495.00 |
| Carlisle | 30.00 | 25.00 |
| Carroll | 30.00 | 30.00 |
| Carter | 27.50 | 45.00 |
| Casey | 20.00 | 30.00 |
| Christian | 140.00 | 155.00 |
| Clark | 90.00 | 65.00 |
| Clay | 25.00 | 25.00 |
| Clinton | 15.00 | 15.00 |
| Crittenden | 30.00 | 25.00 |
| Cumberland | 30.00 | 30.00 |
| Daviess | 155.00 | 165.00 |
| Elliott | | |
| Estill | 25.00 | 25.00 |
| Fayette | 475.00 | 560.00 |
| Fleming | 50.00 | 55.00 |
| Floyd | 20.00 | 20.00 |
| Franklin | 80.00 | 90.00 |
| Fulton | 50.00 | 10.00 |
| Gallatin | 15.00 | 10.00 |
| Garrard | 30.00 | 35.00 |
| Grant | 55.00 | 55.00 |
| Graves | 95.00 | 85.00 |
| Grayson | 48.33 | 30.00 |
| Green | 25.00 | 30.00 |
| Greenup | 45.00 | 45.00 |
| Hancock | 50.00 | 20.00 |
| Hardin | 90.00 | 90.00 |
| Harlan | 185.00 | 175.00 |
| Harrison | 80.00 | 85.00 |
| Hart | 25.00 | 10.00 |
| Henderson | 45.00 | 75.00 |
| Henry | 30.00 | 35.00 |
| Hickman | 35.00 | 30.00 |
| Hopkins | 70.00 | 120.00 |
| Jackson | | 10.00 |
| Jefferson | 1,812.50 | 1,972.50 |
| Jessamine | 15.00 | 50.00 |
| Johnson | 55.00 | 40.00 |
| Knott | | 5.00 |
| Knox | 5.00 | 65.00 |
| Larue | 20.00 | 35.00 |
| Laurel | 45.00 | 45.00 |
| Lawrence | 36.25 | 52.50 |
| Lee | | 5.00 |
| Leslie | 5.00 | |
| Letcher | 55.00 | 140.00 |
| Lewis | 20.00 | 15.00 |
| Lincoln | 40.00 | 55.00 |
| Livingston | 10.00 | 15.00 |
| Logan | 60.00 | 80.00 |
| Lyon | 25.00 | 20.00 |
| McCracken | 205.00 | 195.00 |
| McCreary | 20.00 | 40.00 |
| McLean | 40.00 | 30.00 |
| Madison | 150.00 | 120.00 |
| Magoffin | 5.00 | 5.00 |
| Marion | 45.00 | 45.00 |
| Marshall | 35.00 | 70.00 |
| Martin | | 5.00 |
| Mason | 95.00 | 80.00 |
| Meade | 5.00 | 20.00 |
| Menifee | | 15.00 |
| Mercer | 50.00 | 60.00 |
| Metcalfe | 30.00 | 15.00 |
| Monroe | 15.00 | 5.00 |
| Montgomery | 45.00 | 35.00 |
| Morgan | 10.00 | 10.00 |
| Muhlenberg | 80.00 | 75.00 |
| Nelson | 50.00 | 50.00 |
| Nicholas | 35.00 | 40.00 |
| Ohio | 5.00 | 35.00 |
| Oldham | 15.00 | 20.00 |

| | | |
|---|---|---|
| Owen | 20.00 | 15.00 |
| Owsley | 10.00 | 15.00 |
| Pendleton | 25.00 | 25.00 |
| Perry | 175.00 | 145.00 |
| Pike | 55.00 | 140.00 |
| Powell | 15.00 | 15.00 |
| Pulaski | 70.00 | 75.00 |
| Robertson | 5.00 | 10.00 |
| Rockcastle | 25.00 | 35.00 |
| Rowan | 10.00 | 20.00 |
| Russell | 20.00 | 20.00 |
| Scott | 60.00 | 55.00 |
| Shelby | 80.00 | 75.00 |
| Simpson | 45.00 | 45.00 |
| Spencer | .. .. | .. .. |
| Taylor | 30.00 | 35.00 |
| Todd | 25.00 | 35.00 |
| Trigg | 5.00 | 10.00 |
| Trimble | .. .. | 5.00 |
| Union | 10.00 | 10.00 |
| Warren-Edmonson | 100.00 | 80.00 |
| Washington | 40.00 | 35.00 |
| Wayne | .. .. | .. .. |
| Webster | 35.00 | 30.00 |
| Whitley | 60.00 | 60.00 |
| Wolfe | 10.00 | 25.00 |
| Woodford | 30.00 | 30.00 |
| | $7,694.58 | $8,425.00 |

## EXHIBIT "D"

### Invoice of the Property of the Association.

September 1, 1934

| | |
|---|---|
| 1 Filing Cabinet | $ 64.75 |
| Rubber Stamps | 9.00 |
| Guide Cards | 5.00 |
| 1 Electric Fan | 18.00 |
| 1 Globe Safe with Fixtures | 130.00 |
| 2 Cabinets for Addressograph, 18 drawers, each @ 45.00 | 90.00 |
| 2 Cabinets for Addressograph, 18 drawers, each @ 30.00 | 60.00 |
| 1 Cabinet for Addressograph, 9 drawers | 15.00 |
| 64 Drawers @ 95c each | 60.80 |
| Total | $452.55 |
| 95% Reduction for Depreciation | 429.93 |
| Total Old Property | $ 22.62 |
| 31 Bound Volumes Kentucky Medical Journals, 1903-33 | $310.00 |
| 1 Underwood Typewriter 83.03 | |
| Less 40% Depreciation 33.21 | 49.82 |
| 1 Cabinet for Medical Journals | 63.20 |
| 1 Allen Wales Adding Machine No. 10350 | 175.00 |
| 1,000 No. 5 2-cent envelopes, plain @ 21.96 per M | 21.96 |
| 3,000 No. 5 3-cent envelopes, plain @ 31.96 per M | 95.88 |
| 150 No. 8 2-cent envelopes, plain @ 22.88 per M | 3.42 |
| 1,750 No. 9 2-cent envelopes, Kentucky State Medical Association, @ 23.16 per M | 40.53 |
| Total | $782.43 |

## EXHIBIT "E"

### Secretary's Monthly Balance Sheet, Agreeing with Books.

| | Expenses | Collections | Balance |
|---|---|---|---|
| 1933 | | | |
| Sept. 1 Balance on hand | | | $5,425.10 |
| Oct. 1 | $2,179.87 | $1,163.97 | $4,409.20 |
| Nov. 1 | 1,126.37 | 846.48 | 4,129.31 |
| Dec. 1 | 1,483.84 | 367.42 | 3,012.89 |
| 1934 | | | |
| Jan. 1 | 1,111.28 | 581.29 | 2,482.90 |
| Feb. 1 | 1,392.02 | 1,350.99 | 2,441.87 |
| Mar. 1 | 1,512.96 | 2,420.88 | 3 349.79 |
| Apr. 1 | 1,118.47 | 1,483.81 | 3,715.33 |
| May 1 | 1.058.73 | 2,684.78 | 5,341.18 |
| June 1 | 928.01 | 1,720.98 | 6,134.15 |
| July 1 | 1,198.77 | 369.70 | 5 305.08 |
| Aug. 1 | 1,766.47 | 850.57 | 4,389.18 |
| Sep. 1 | 843.90 | ..... | 3,545.28 |
| Tax on Checks | 2.88 | ..... | 3,542.40 |
| | $15,723.57 | $13,840.87 | |
| Balance on hand September 1, 1933 | | 5,425.10 | 19,265.97 |
| Balance on hand September 1, 1934 | | $ 3,542.40 | |
| Total Expenses | | 15,723.57 | $19,265.97 |

## EXHIBIT "F"

### Collections by Secretary on account of Kentucky State Medical Association, corresponding with checks, deposit slips and receipts filed.

| | |
|---|---|
| 1933 | |
| Oct. 1—To collections to date | $ 260.00 |
| Nov. 1—To collections to date | 170.00 |
| Dec. 1—To collections to date | 85.00 |
| 1934 | |
| Jan. 1—To collections to date | 95.00 |
| Feb. 1—To collections to date | 820.00 |
| Mar. 1—To collections to date | 1 930.00 |
| Apr. 1—To collections to date | 1,235.00 |
| May 1—To collections to date | 2,235.00 |
| June 1—To collections to date | 1,195.00 |
| July 1—To collections to date | 235.00 |
| Aug. 1—To collections to date | 170.18 |
| Total for Year | $8,430.18 |

## EXHIBIT "G"

### Collections by Editor on account of the Journal, corresponding with checks, deposit slips and receipts filed.

| | |
|---|---|
| 1933 | |
| Oct. 1—To collections to date | $ 903.97 |
| Nov. 1—To collections to date | 676.48 |
| Dec. 1—To collections to date | 282.42 |
| 1934 | |
| Jan. 1—To collections to date | 486.29 |
| Feb. 1—To collections to date | 530.99 |
| Mar. 1—To collections to date | 490.88 |
| Apr. 1—To collections to date | 248.81 |
| May 1—To collections to date | 449.78 |
| June 1—To collections to date | 525.98 |
| July 1—To collections to date | 134.70 |
| Aug. 1—To collections to date | 680.39 |
| Total for Year | $5,410.69 |

## EXHIBIT "H"

### Total membership by Councilor Districts and by Counties for 1934 as compared to that of 1933.

First District—V. A. Stilley, Benton, Councilor.

| | 1933 | 1934 |
|---|---|---|
| Ballard | 6 | 7 |
| Caldwell | 9 | 10 |
| Calloway | 16 | 15 |
| Carlisle | 6 | 5 |
| Crittenden | 5 | 5 |
| Fulton | 10 | 1 |
| Graves | 19 | 16 |
| Hickman | 7 | 6 |
| Livingston | 2 | 3 |
| Lyon | 5 | 4 |
| Marshall | 7 | 10 |
| McCracken | 41 | 39 |
| Trigg | 1 | 1 |
| | 134 | 122 |

Second District—D. M. Griffith, Owensboro, Councilor

| | | |
|---|---|---|
| Daviess | 31 | 30 |
| Hancock | 5 | 4 |
| Henderson | 8 | 14 |
| Hopkins | 14 | 21 |
| McLean | 8 | 6 |
| Muhlenberg | 16 | 15 |
| Ohio | 1 | 4 |
| Union | 1 | 1 |
| Webster | 7 | 5 |
| | 91 | 100 |

Third District—C. C. Turner Glasgow, Councilor.

| | | |
|---|---|---|
| Allen | 7 | 7 |
| Barren | 16 | 16 |
| Butler | 2 | 2 |
| Christian | 28 | 29 |
| Cumberland | 6 | 6 |
| Logan | 12 | 16 |
| Metcalfe | 5 | 3 |
| Monroe | 3 | 1 |
| Simpson | 9 | 9 |
| Todd | 5 | 7 |
| Warren-Edmonson | 19 | 13 |
| | 112 | 109 |

| Fourth District—J. I. Greenwell, New Haven, Councilor | | |
|---|---|---|
| Breckenridge | 4 | 7 |
| Bullitt | 4 | 4 |
| Grayson | 10 | 6 |
| Hardin | 18 | 18 |
| Hart | 5 | 2 |
| Larue | 4 | 6 |
| Meade | 1 | 4 |
| Nelson | 10 | 10 |
| Spencer | .. | .. |
| | 56 | 57 |

| Fifth District—W. E. Gardner, Louisville, Councilor. | | |
|---|---|---|
| Carroll | 6 | 6 |
| Franklin | 16 | 18 |
| Gallatin | 3 | 2 |
| Henry | 6 | 6 |
| Jefferson | 332 | 346 |
| Oldham | 3 | 3 |
| Owen | 4 | 3 |
| Shelby | 16 | 15 |
| Trimble | .. | 1 |
| | 386 | 400 |

| Sixth District—R. C. McChord, Lebanon, Councilor | | |
|---|---|---|
| Adair | 5 | 8 |
| Anderson | 9 | 8 |
| Boyle | 11 | 12 |
| Green | 5 | 6 |
| Marion | 9 | 9 |
| Mercer | 10 | 12 |
| Taylor | 6 | 7 |
| Washington | 8 | 7 |
| | 63 | 69 |

| Seventh District, V. G. Kinnaird, Lancaster, Councilor. | | |
|---|---|---|
| Casey | 4 | 5 |
| Clinton | 3 | 3 |
| Garrard | 6 | 7 |
| Lincoln | 8 | 11 |
| McCreary | 4 | 7 |
| Pulaski | 14 | 15 |
| Rockcastle | 5 | 6 |
| Russell | 4 | 4 |
| Wayne | .. | .. |
| | 48 | 58 |

| Eighth District—C. W. Shaw, Alexandria Councilor | | |
|---|---|---|
| Boone | 2 | 3 |
| Bracken | 5 | 9 |
| Campbell-Kenton | 91 | 95 |
| Fleming | 10 | 10 |
| Grant | 11 | 11 |
| Harrison | 16 | 16 |
| Mason | 20 | 16 |
| Nicholas | 7 | 8 |
| Pendleton | 5 | 5 |
| Robertson | 1 | 2 |
| | 168 | 175 |

| Ninth District—S. C. Smith, Ashland, Councilor. | | |
|---|---|---|
| Boyd | 35 | 33 |
| Carter | 6 | 9 |
| Elliott | .. | .. |
| Floyd | 4 | 4 |
| Greenup | 9 | 8 |
| Johnson | 10 | 8 |
| Lawrence | 7 | 9 |
| Lewis | 4 | 3 |
| Magoffin | 1 | 1 |
| Martin | .. | 1 |
| Pike | 11 | 25 |
| | 87 | 101 |

| Tenth District—C. A. Vance, Lexington, Councilor. | | |
|---|---|---|
| Bath | 5 | 9 |
| Bourbon | 15 | 15 |
| Breathitt | 7 | 8 |
| Clark | 17 | 12 |
| Estill | 5 | 5 |
| Fayette | 94 | 102 |
| Jessamine | 3 | 5 |
| Lee | .. | 1 |
| Madison | 30 | 24 |
| Menifee | .. | 1 |
| Montgomery | 9 | 7 |
| Morgan | 2 | 2 |
| Owsley | 2 | 3 |
| Powell | 3 | 3 |
| Rowan | 2 | 4 |
| Scott | 12 | 9 |
| Wolfe | 2 | 5 |
| Woodford | 6 | 6 |
| | 214 | 221 |

| Eleventh District—H. K. Buttermore, Liggett, Councilor | | |
|---|---|---|
| Bell | 21 | 21 |
| Clay | 5 | 5 |
| Harlan | 35 | 30 |
| Jackson | .. | 1 |
| Knott | .. | .. |
| Knox | 1 | 13 |
| Laurel | 9 | 9 |
| Leslie | 1 | .. |
| Letcher | 11 | 20 |
| Perry | 33 | 28 |
| Whitley | 11 | 12 |
| | 127 | 139 |

## EXHIBIT "I"

Detailed Statement of Disbursements of Marshall McDowell, M. D., Treasurer, Kentucky State Medical Association, each made on a Voucher Check signed by W. M. Martin, M. D., President, A. T. McCormack, M. D., Secretary, and himself, from September 1, 1933 to September 1, 1934.

1933

Sept. 15—Voucher Check No. 1 ..... $504.80

TIMES-JOURNAL PUBLISHING CO., Bowling Green

| | | |
|---|---|---|
| To 2050—68 page August Issue | 393.60 | |
| To Envelopes | 15.00 | |
| To Printing Envelopes | 2.30 | |
| | 410.90 | |
| Less credit by Check No. 124, dated 7-31-33 | 300.00 | 110.90 |
| To 2500—88 page September Issue | 586.60 | |
| To Setting 71680 Ems. 6 pt. | 71.50 | |
| To Inserts and Scoring | 8.50 | |
| To Inserts—no Scoring | 5.00 | |
| To Envelopes | 15.00 | |
| To Printing Envelopes | 2.30 | |
| | 688.90 | |
| Less credit by Check No. 129, dated 8-31-33 | 300.00 | 388.90 |
| To Postage | .50 | |
| To 1500 Registration Cards | 4.50 | 5.00 |
| | | 504.80 |

Approved by Council and Ordered Paid by House of Delegates.

Sept. 30 —Voucher Check No. 2 ..... $202.80

A. T. McCORMACK, M. D. Louisville

| | |
|---|---|
| To September salary, Secretary | 135.00 |
| To State Meeting expense | 67.80 |
| | 202.80 |

Approved by Council and Ordered Paid by House of Delegates.

Sept. 30—Voucher Check No. 3 ..... 90.00

L. H. SOUTH, M. D., Louisville

To September salary, Business Manager.

Approved by Council and Ordered Paid by House of Delegates.

Sept. 30—Voucher Check No. 4 ..... $121.60
J. F. BLACKERBY, Louisville
To September services rendered Committee on Public Policy ..... 90.00
To State Meeting expense ..... 31.60
121.60
Approved by Council and Ordered Paid by House of Delegates.

Sept. 30—Voucher Check No. 5 ..... $112.55
ELVA GRANT, Louisville
To September salary, Bookkeeper ..... 75.00
To State Meeting expense ..... 37.55
112.55
Approved by Council and Ordered Paid by House of Delegates.

Sept. 30—Voucher Check No. 6 ..... $60.58
B. P. EUBANK, Bowling Green
To auditing accounts of Marshall McDowell, M. D., Treasurer and A. T. McCormack, M. D., Secretary, Kentucky State Medical Association, and Mrs. C. H. Krieger, Treasurer, Woman's Auxiliary, for the period September 1, 1932 through August 31, 1933 ..... 50.00
To traveling expenses ..... 10.58
60.58
Approved by Council and Ordered Paid by House of Delegates.

Sept. 30—Voucher Check No. 7 ..... $28.84
PHILIP F. BARBOUR M. D., Louisville
To expense of trips to Ashland District, Morehead, London and Cynthiana.
Approved by Council and Ordered Paid by House of Delegates.

Sept. 30—Voucher Check No. 8 ..... $90.54
CHARLES A. VANCE, M. D., Lexington
To expense as Councilor, 10th District.
Approved by Council and Ordered Paid by House of Delegates.

Sept. 30—Voucher Check No. 9 ..... $35.00
AMERICAN MEDICAL ASSOCIATION, Chicago
To 2500 Inserts of Dr. William M. Martin's picture for Annual Number, September, 1933 Journal.
Approved by Council and Ordered Paid by House of Delegates.

Sept. 30—Voucher Check No. 10 ..... $54.32
F. & V. MANUFACTURING CO., East Providence, R. I.
To 400 Bangles for State Meeting.
Approved by Council and Ordered Paid by House of Delegates.

Sept. 30—Voucher Check No. 11 ..... $3.00
BRAKMEIER BROS. Louisville
To 1 signature stamp, William M. Martin.
Approved by Council and Ordered Paid by House of Delegates.

Sept. 30—Voucher Check No. 12 ..... $11.45
MEFFERT EQUIPMENT CO., Louisville
To 2 1-2 M 4x6 Plain Record Cards ..... 5.00
To 1 M 4x6 Buff Ledger Cards—Punched ..... 6.45
11.45
Approved by Council and Ordered Paid by House of Delegates.

Sept. 30—Voucher Check No. 13 ..... $5.50
FRED HAUPT CO., Louisville
To design for Dr. Robt. L. Woodard.
Approved by Council and Ordered Paid by House of Delegates.

Sept. 30—Voucher Check No. 14 ..... $36.22
BUSH-KREBS CO., Louisville
To cuts.
Approved by Council and Ordered Paid by House of Delegates.

Sept. 30—Voucher Check No. 15 ..... $8.60
D. M. GRIFFITH, M. D., Owensboro
To expense as Councilor, 2nd District
Approved by Council and Ordered Paid by House of Delegates.

Sept. 30—Voucher Check No. 16 ..... $50.00
CLARENCE NEIGHBORS, P. M., Bowling Green
To postage for Journal.
Approved by Council and Ordered Paid by House of Delegates

Sept. 30—Voucher Check No. 17 ..... $47.85
MAYME SULLIVAN, Louisville
To reimbursement for the following:
Long distance calls, 5-24, 6-7, 8, 9 and 7-15, 19-33 ..... 6.55
Telegram to Cleveland, 6-29-33 ..... .48
Express charges, 7-15, 20, 22 8-2, 18, 19, 26, 29, 30 and 9-1-33 ..... 9.12
16.15
To State Meeting expense ..... 31.70
47.85
Approved by Council and Ordered Paid by House of Delegates.

Sept. 30—Voucher Check No. 18 ..... $75.00
O. P. KIMBALL, M. D., Cleveland
To State Meeting expense.
Approved by Council and Ordered Paid by House of Delegates.

Sept. 30—Voucher Check No. 19 ..... $9.05
V. A. STILLEY, M. D., Benton
To State Meeting expense as Councilor 1st District.
Approved by Council and Ordered Paid by House of Delegates.

Sept. 30—Voucher Check No. 20 ..... $9.15
RUTH FLAGG, Louisville
To State Meeting expeuse.
Approved by Council and Ordered Paid by House of Delegates.

Sept. 30—Voucher Check No. 21 ..... $8.90
AGNES E. BLAIR, Louisville
To State Meeting expense.
Approved by Council and Ordered Paid by House of Delegates.

Sept. 30—Voucher Check No. 22 ..... $100.00
L. R. CURTIS, Attorney, Louisville
To services rendered in case: Bruce vs. Louis Frank, M. D., et al.
Approved by Council and Ordered Paid by House of Delegates.

Sept. 30—Voucher Check No. 23 ..... $506.27
TIMES-JOURNAL PUBLISHING CO., Bowling Green
To 500 Annual Programs—32 pages and cover ..... 75.00
To 200 Reproductions of Programs ..... 4.50 79.50
To account of October Journal ..... 419.80
To Printing Envelopes ..... 2.30
To Envelopes ..... 15.00 437.10
516.60
Less 2% discount ..... 10.33
506.27
Approved by Council and Ordered Paid by House of Delegates.

Sept. 30—Voucher Check No. 24 ..... $7.85
RAILWAY EXPRESS AGENCY, INC. Louisville
To express on Journals and cuts.
Approved by Council and Ordered Paid by House of Delegates.

Oct. 31—Voucher Check No. 25 ..... $200.75
A. T. McCORMACK, M. D., Louisville
To October salary, Secretary ..... 135.00
To expense to Secretary's Conference at Chicago ..... 65.75
200.75

Oct. 31—Voucher Check No. 26 ..... $90.00
L. H. SOUTH, M. D., Louisville
To October salary, Business Manager.

Oct. 31—Voucher Check No. 27 ..... $90.00
J. F. BLACKERBY, Louisville
To October services rendered Committee on Public Policy.

Oct. 31—Voucher Check No. 28 ..... $75.00
ELVA GRANT, Louisville
To October salary, Bookkeeper.

Oct. 31—Voucher Check No. 29 ..... $35.00
V. A. STILLEY M. D., Benton
To expense as Councilor, 1st District.

Oct. 31—Voucher Check No. 30 ..... $50.00
MURRAY STATE TEACHERS COLLEGE, Murray
To luncheon for Woman's Auxiliary, 64 plates @ 75c ..... 48.00
To Dr. Kimball's expense ..... 2.00
50.00

Oct. 31—Voucher Check No. 31 ..... $2.60
THE STEWART DRY GOODS CO., Louisville
To 2 Frames.

Oct. 31—Voucher Check No. 32 ..... $2.23
RAILWAY EXPRESS AGENCY, INC., Louisville
To express to Times-Journal 9-1-33 ..... .37
To express to The Ledger and Times, Murray, 9-5-33 ..... .46
To express to Times-Journal, 9-13-33 ..... 95
To express to Dr. Marshall McDowell, Cynthiana, 9-23-33 ..... .45
2.23

Oct. 31—Voucher Check No. 33 ..... $43.76
BUSH-KREBS CO., Louisville
To 15 cuts ..... 63.04
Less credit ..... 19.28
43.76

Oct. 31—Voucher Check No. 34 ..... $9.09
MAYME SULLIVAN, Louisville
To reimbursement for the following:
Long distance calls to Times-Journal about Journal, 8-15 and 21-33 ..... 2.10
Telegrams regarding State Meeting, 8-26, 9-4 6, 9, 13-33 ..... 3.78
Long distance calls to Times-Journal about Programs for State Meeting, 9-6 and 7-33 ..... 2.40
Express on Journals from Bowling Green, 10-2-33 ..... .81
9.09

Oct. 31—Voucher Check No. 35 ..... $2.39
WESTERN UNION TELEGRAPH CO., Lonisville
To telegrams sent out from Murray in regard to State Meeting.

Oct. 31—Voucher Check No. 36 ..... $133.33
TIMES-JOURNAL PUBLISHING CO., Bowling Green
To 2000—76 Page October Issue ..... 440.80
Less credit by Check No. 23 dated 9-30-33 ..... 409.47
Balance due ..... 31.33
To 15 M Letterheads, Secretary ..... 60.00
To 10 M Blank Sheets, Secretary ..... 17.50
To 250 Letterheads and 250 Envelopes, Dr. Howard ..... 4.00
To 300 Leterheads and 300 Envelopes, Dr. Shaw ..... 4.50
To 500 Letterheads and 500 Envelopes, Dr. Vance ..... 6.00
To 500 Letterheads and 500 Envelopes, Dr. Martin ..... 6.00
To 250 Letterheads and 250 Envelopes Dr. Turner ..... 4.00
133.33

Oct. 31—Voucher Check No. 37 ..... $11.60
THE PENDENNIS CLUB, Louisville
To luncheon on September 3rd for 10 members of the Council.

Oct. 31—Voucher Check No. 38 ..... $380.62
TIMES-JOURNAL PUBLISHING CO., Bowling Green
To 2050—60 Page November Issue ..... 367.00
To Printing Envelopes ..... 2.30
To Inserts and Scoring ..... 8.50
To Extra Postage ..... .32
To Express on Stationery ..... 2.50
380.62

Nov. 29—Voucher Check No. 39 ..... $135.00
A. T. McCORMACK M. D., Louisville
To November salary, Secretary.

Nov. 29—Voucher Check No. 40 ..... $90.00
L. H. SOUTH, M. D., Louisville
To November salary, Business Manager

Nov. 29—Voucher Check No. 41 ..... $90.00
J. F. BLACKERBY, Louisville
To November services rendered Committee on Public Policy.

Nov. 29—Voucher Check No. 42 ..... $75.00
ELVA GRANT, Louisville
To November salary, Bookkeeper.

Nov. 29—Voucher Check No. 43 ..... $2.00
V. A. STILLEY, M. D. Benton
To State Meeting expense as Councilor, 1st District.

Nov. 29—Voucher Check No. 44 ..... $12.50
HINES & COOKE, Bowling Green
To premium on bond for Treasurer, Marshall McDowell, M. D., for 1 year.

Nov. 29—Voucher Check No. 45 ..... $578.59
MASTER REPORTING COMPANY, INC., Washington
To reporting 83rd Annual Session at Murray:

| | |
|---|---|
| Opening Session | 18.76 |
| House of Delegates | 237.73 |
| Scientific Sessions | 182.99 |
| Abridging 7 Sessions | 70.00 |
| Postage and Express | 4.42 |
| Traveling Expense | 64.69 |
| | 578.59 |

Nov. 29—Voucher Check No. 46 ..... $500.75
TIMES-JOURNAL PUBLISHING CO., Bowling Green

| | |
|---|---|
| To 2050—72 Page December Issue | 474.50 |
| To Printing Envelopes | 2.30 |
| To 6 pt. Tabular Work and Index | 23.95 |
| | 500.75 |

Dec. 23—Voucher Check No. 47 ..... $135.00
A. T. McCORMACK, M. D. Louisville
To December salary, Secretary.

Dec. 23—Voucher Check No. 48 ..... $90.00
L. H. SOUTH, M. D., Louisville
To December salary, Business Manager.

Dec. 23—Voucher Check No. 49 ..... $90.00
J. F. BLACKERBY, Louisville
To December services rendered Committee on Public Policy.

Dec. 23—Voucher Check No. 50 ..... $75.00
ELVA GRANT, Louisville
To December salary, Bookkeeper.

Dec. 23—Voucher Check No. 51 ..... $12.00
AMERICAN MEDICAL ASSOCIATION, Chicago
To 1 copy of 13th Edition of the American Medical Directory.

Dec. 23—Voucher Check No. 52 ..... $6.58
RAILWAY EXPRESS AGENCY, Louisville

| | |
|---|---|
| To express to Times-Journal Publishing Co. 11-16-33 and 11-25-33 | 2.24 |
| To express from Times-Journal Publishing Co., 10-2, 14, 17 and 24-33 and 11-15 and 21-33 | 4.34 |
| | 6.58 |

Dec. 23—Voucher Check No. 53 ..... $3.90
MAYME SULLIVAN, Louisville
To reimbursement for the following:

| | |
|---|---|
| Telephone call to Bowling Green, 9-5-33 | 1.20 |
| Telephone call to Harlan, 10-2-33 | 1.80 |
| Telephone call to Bowling Green, 11-20-33 | .90 |
| | 3.90 |

Dec. 23—Voucher Check No. 54 ..... $698.80
TIMES-JOURNAL PUBLISHING CO., Bowling Green

| | | |
|---|---|---|
| To 2200—104 Page January Issue | 718.00 | |
| Less credit | 54.00 | 664.00 |
| To 7612 ems. Tabular Work | | 9.00 |
| To Envelopes | | 15.00 |
| To Printing Envelopes | | 2.30 |
| To Inserts and Scoring | | 8.50 |
| | | 698.80 |

1934

Jan. 31—Voucher Check No. 55 ..... $135.00
A. T. McCORMACK, M. D., Louisville
To January salary Secretary.

Jan. 31—Voucher Check No. 56 ..... $90.00
L. H. SOUTH, M. D., Louisville
To January salary, Business Manager.

Jan. 31—Voucher Check No. 57 ..... $90.00
J. F. BLACKERBY, Louisville
To January services rendered Committee on Public Policy.

Jan. 31—Voucher Check No. 58 ..... $75.00
ELVA GRANT, Louisville
To January salary, Bookkeeper.

Jan. 31—Voucher Check No. 59 ..... $150.00
L. R. CURTIS, Attorney, Louisville
To legal services, July 1, 1933-Jan. 1 1934.

Jan. 31—Voucher Check No. 60 ..... $150.00
W. M. GARDNER, Attorney, West Liberty
To Attorney's fees in case: Vernon J. Vansant, Admr. vs. T. J. Overstreet, M. D., et al.

Jan. 31—Voucher Check No. 61 ..... $29.60
H. K. BUTTERMORE, M. D., Liggett
To 1933 expenses as Councilor of 11th District.

Jan. 31—Voucher Check No. 62 ..... $5.50
THE FRANKLIN PRINTING CO., Louisville
To 1 M No. 10 White Envelopes.

Jan. 31—Voucher Check No. 63 ..... $42.00
THE COLUMBIA CARBON COMPANY Dayton, Ohio
To 20 coupons No. 231288 each good for 1 box Mineral Wax No. 777 black or No. 74 or No. 421 black typing carbon, 8 1-2 x 11 or 8 1-2 x 13 @ 3.00 .... 60.00
To 10 coupons No. M-29756 each good for SanSilk Brand typewriter ribbon @ 1.00 10.00

70.00
Less 40% discount ..... 28.00

42.00

Jan. 31—Voucher Check No. 64 ..... $1.32
RAILWAY EXPRESS AGENCY, Louisville
To express to Times-Journal Publishing Co., 12-14 and 15-33.

Jan. 31—Voucher Check No. 65 ..... $1.80
MAYME SULLIVAN, Louisville
To reimbursement for the following:
Telephone calls to Bowling Green, Nov. 28 and Dec. 4.

Jan. 31—Voucher Check No. 66 ..... $112.50
ALLEN-WALES ADDING MACHINE CORPORATION, New York
To 1 Allen-Wales Adding Machine No. 45-10350 ..... 175.00
Less credit ..... 62.50

112.50

Jan. 31—Voucher Check No. 67 ..... $509.30
TIMES-JOURNAL PUBLISHING CO., Bowling Green
To 2100—68 Page February Issue ..... 453.00
To Printing Envelopes ..... 2.30
To Balance due on January Issue—8 more pages ..... 54.00

509.30

Feb. 23—Voucher Check No. 68 ..... $105.00
LOUISVILLE POSTMASTER, Louisville
To 2500 No. 5 3c Envelopes ..... 79.90
To 1000 No. 8 3c Envelopes ..... 32.88

112.78
Less credit ..... 7.78

105.00

Feb. 28—Voucher Check No. 69 ..... $7.78
LOUISVILLE POSTMASTER, Louisville
To postage.

Feb. 28—Voucher Check No. 70 ..... $135.00
A. T. McCORMACK M. D., Louisville
To February salary, Secretary.

Feb. 28—Voucher Check No. 71 ..... $90.00
L. H. SOUTH, M. D., Louisville
To February salary, Business Manager.

Feb. 28—Voucher Check No. 72 ..... $90.00
J. F. BLACKERBY, Louisville
To February services rendered Committee on Public Policy.

Feb. 28—Voucher Check No. 73 ..... $75.00
ELVA GRANT, Louisville
To February salary, Bookkeeper.

Feb. 28—Voucher Check No. 74 ..... $154.96
L. R. CURTIS, Attorney, Louisville
To services rendered in case Maxine Lee vs. D. W. Gaddie M. D. ..... 150.00
To expenses in case Maxine Lee vs. D. W. Gaddie, M. D. ..... 4.96

154.96

Feb. 28—Voucher Check No. 75 ..... $150.00
OTIS M. MATHER, Attorney, Hodgenville
To services rendered in case Maxine Lee vs. D. W. Gaddie, M. D.

Feb. 28—Voucher Check No. 76 ..... $14.95
BERNY M. MORRIS, Clerk Larue Circuit Court, Hodgenville
To court costs in case Maxine Lee vs. D. W. Gaddie, M. D.

Feb. 28—Voucher Check No. 77 ..... $15.75
PHILIP F. BARBOUR, M. D., Louisville
To expenses for trip to Greenville for Dr. Sherrill and self.

Feb. 28—Voucher Check No. 78 ..... $3.82
MAYME SULLIVAN Louisville
To reimbursement for the following:
Eleven telegrams on Jan. 19th to members of the Council ..... 2.92
Long distance call to Bowling Green on Dec. 26th ..... .90

3.82

Feb. 28—Voucher Check No. 79 ..... $6.93
WESTERN UNION TELEGRAPH CO., Louisville
To 11 messages to Senators and Representatives at Washington on Jan. 24, 1934.

Feb. 28—Voucher Check No. 80 ..... $14.70
PENDENNIS CLUB, Louisville
To luncheon for 14 at Council Meeting on Jan. 21, 1934 ..... 14.00
To service charge ..... .70

14.70

Feb. 28—Voucher Check No. 81 ..... $3.50
BRAKMEIER BROS., Louisville
To 1 woodcut of signature and stamp.

Feb. 28—Voucher Check No. 82 ..... $50.00
CLARENCE NEIGHBORS, P. M., Bowling Green
To postage for Journals.

Feb. 28—Voucher Check No. 83 ..... $22.50
AMERICAN MEDICAL ASSOCIATION, Chicago
To 9 Bound Volumes 19, 1933 Federation Bulletin.

Feb. 28—Voucher Check No. 84 ..... $63.20
ANDERSON MANUFACTURING COMPANY, Louisville
To lumber for cabinet ..... 19.00
To doors, cabinet locks, hinges and screws for cabinet ..... 44.20
63.20

Feb. 28—Voucher Check No. 85 ..... $3.07
RAILWAY EXPRESS AGENCY, INC., Louisville
To express from Bowling Green, 1-8 and 1-18-34 ..... 2.11
To express to Bowling Green, 1-16-34 ..... .96
3.07

Feb. 28—Voucher Check No. 86 ..... $506.80
TIMES-JOURNAL PUBLISHING CO., Bowling Green
To 2100—72 Page March Issue ..... 481.00
To envelopes ..... 15.00
To printing envelopes ..... 2.30
To inserts and scoring ..... 8.50
506.80

Mar. 31—Voucher Check No. 87 ..... $423.85
A. T. McCORMACK, M. D., Louisville
To March salary, Secretary ..... 135.00
To sundry expense ..... 288.85
423.85

Mar. 31—Voucher Check No. 88 ..... $33.50
L. H. SOUTH, M. D., Louisville
To March salary 1 week, Business Manager ..... 21.00
To expense to Murray Meeting ..... 12.50
33.50

Mar. 31—Voucher Check No. 89 ..... $90.00
J. F. BLACKERBY, Louisville
To March services rendered Committee on Public Policy

Mar. 31—Voucher Check No. 90 ..... $75.00
ELVA GRANT, Louisville
To March salary, Bookkeeper.

Mar. 31—Voucher Check No. 91 ..... $2.55
SOUTHERN BELL TELEPHONE & TELEGRAPH CO., Louisville
To long distance calls, as follows:
Two calls to Greenville about meeting of Muhlenberg County Medical Society 1-26 and 29-34 ..... 1.45
Two calls to Bowling Green about Journal, 2-21 and 23-34 ..... 1.10
2.55

Mar. 31—Voucher Check No. 92 ..... $7.80
M. & C. FREIGHT LINES, Bowling Green
To hauling 5 cartons of scrap metal from Bowling Green to Louisville.

Mar. 31—Voucher Check No. 93 ..... $2.47
RAILWAY EXPRESS AGENCY Louisville
To express to Bowling Green, 2-17 and 27-34 ..... 1.72
To express from Bowling Green, 2-9-34 ..... .75
2.47

Mar. 31—Voucher Check No. 94 ..... $483.30
TIMES-JOURNAL PUBLISHING CO., Bowling Green
To 2150—68 Page April Issue ..... 460.00
To envelopes ..... 15.00
To printing envelopes ..... 2.30
477.30
To 500 letterheads and 500 envelopes for Dr. Thomas, Secretary, Eye, Ear, Nose and Throat Section ..... 6.00
483.30

Apr. 30—Voucher Check No. 95 ..... $135.00
A. T. McCORMACK M. D., Louisville
To April salary, Secretary.

Apr. 30—Voucher Check No. 96 ..... $90.00
L. H. SOUTH, M. D., Louisville
To April salary, Business Manager.

Apr. 30—Voucher Check No. 97 ..... $90.00
J. F. BLACKERBY, Louisville
To April services rendered Committee on Public Policy.

Apr. 30—Voucher Check No. 98 ..... $75.00
ELVA GRANT, Louisville
To April salary, Bookkeeper.

Apr. 30—Voucher Check No. 99 ..... $149.80
LOUISVILLE POSTMASTER, Louisville
To 5 M No. 5 3c envelopes ..... 159.80
Less credit ..... 10.00
149.80

Apr. 30—Voucher Check No. 100 ..... $10.00
LOUISVILLE POSTMASTER, Louisville
To postage.

Apr. 30—Voucher Check No. 101 ..... $2.13
RAILWAY EXPRESS AGENCY, Louisville
To express charges from Bowling Green 3-7 and 22-34 ..... 1.15
To express charges to Bowling Green, 3-16-34 ..... .98
2.13

Apr. 30—Voucher Check No. 102 ..... $2.25
THE STEWART DRY GOODS CO., Louisville
To 1 bolt of ribbon for Councilors' badges at 1934 meeting.

Apr. 30—Voucher Check No. 103 ..... $1.25
MEFFERT EQUIPMENT CO., Louisville
To 1 box envelopes.

Apr. 30—Voucher Check No. 104 ..... $498.30
TIMES-JOURNAL PUBLISHING CO., Bowling Green
To 2100—72 Page May Issue ..... 481.00
To envelopes ..... 15.00
To printing envelopes ..... 2.30
498.30

Apr. 30—Voucher Check No. 105 ..... $5.00
E. J. LOVE, M. D., Petersburg
To return of 1934 dues.

May 31—Voucher Check No. 106 ..... $135.00
A. T. McCORMACK, M. D. Louisville
To May salary, Secretary.

May 31—Voucher Check No. 107 ..... $90.00
L. H. SOUTH, M. D., Louisville
To May salary, Business Manager.

May 31—Voucher Check No. 108 ..... $90.00
J. F. BLACKERBY, Louisville
To May services rendered Committee on Public Policy.

May 31—Voucher Check No. 109 ..... $75.00
ELVA GRANT, Louisville
To May salary, Bookkeeper.

May 31—Voucher Check No. 110 ..... $4.49
MAYME SULLIVAN, Louisville
To reimbursement for the following:
Telephone call to Glasgow, 2-5-34 ..... .65
Telephone call to Bowling Green 3-1-34 ..... .90
Six typewriter ribbons, 4-25-34 ..... 2.94
4.49

May 31—Voucher Check No. 111 ..... $4.00
MEFFERT EQUIPMENT CO., Louisville
To 1 M No. 10 White Envelopes ..... 3.00
To 1 No. 591 Transfer Case ..... 1.00
4.00

May 31—Voucher Check No. 112 ..... $4.94
BUSH-KREBS CO., Louisville
To 2 Sq. Copper Halftones of Medical Subjects ..... 7.77
Less credit ..... 2.83
4.94

May 31—Voucher Check No. 113 ..... $2.28
RAILWAY EXPRESS AGENCY, INC., Louisville
To express charges from Bowling Green, 4-9 and 16-34 ..... 1.07
To express charges to Bowling Green, 4-18 and 24-34 ..... 1.21
2.28

May 31—Voucher Check No. 114 ..... $522.30
TIMES-JOURNAL PUBLISHING CO., Bowling Green
To 2100—80 Page June Issue ..... 535.00
To printing envelopes ..... 2.30
537.30
Less credit ..... 15.00
522.30

June 30—Voucher Check No. 115 ..... $308.80
A. T. McCORMACK, M. D., Louisville
To June salary, Secretary ..... 135.00
To expense ..... 173.80
308.80

June 30—Voucher Check No. 116 ..... $90.00
L. H. SOUTH, M. D., Louisville
To June salary, Business Manager.

June 30—Voucher Check No. 117 ..... $90.00
J F. BLACKERBY, Louisville
To June services rendered Committee on Public Policy.

June 30—Voucher Check No. 118 ..... $75.00
ELVA GRANT, Louisville
To June salary, Bookkeeper.

June 30—Voucher Check No. 119 ..... $1.35
MAYME SULLIVAN, Louisville
To reimbursement for the following:
Long distance call to Dr. Martin, Harlan, 4-4-34.

June 30—Voucher Check No. 120 ..... $50.00
CLARENCE NEIGHBORS, P M., Bowling Green
To postage for the Journal.

June 30—Voucher Check No. 121 ..... $10.00
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To 200 Blue Prints of Exhibit Space for Harlan Meeting.

June 30—Voucher Check No. 122 ..... $1.75
WOMAN'S AUXILIARY, KENTUCKY STATE MEDICAL ASSOCIATION, Louisville
To advertisement in Kentucky Medical Journal Supplement ..... 22.50
Applied on account of binding of Kentucky Medical Journal ..... 1.75
Balance due from Kentucky Book Mfg. Co. ..... 20.75

June 30—Voucher Check No. 123 ..... $2.75
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June 30—Voucher Check No. 124 ..... $3.32
RAILWAY EXPRESS AGENCY, Louisville
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June 30—Voucher Check No. 125 ..... $565.80
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To Printing Envelopes ..... 2.30
552.30
To 200 Applications for Space ..... 7.50
To 200 Commercial Exhibits ..... 6.00 13.50
565.80

July 31—Voucher Check No. 126 ..... $438.05
A. T. McCORMACK, M. D., Louisville
To July salary, Secretary ..... 135.00
To sundry expense ..... 303.05
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July 31—Voucher Check No. 127 ..... $90.00
L. H. SOUTH M. D., Louisville
To July salary, Business Manager.

July 31—Voucher Check No. 128 ..... $90.00
J. F. BLACKERBY, Louisville
To July services rendereed Committee on Public Policy.

July 31—Voucher Check No. 129 ..... $75.00
ELVA GRANT, Louisville
To July salary, Bookkeeper.

July 31—Voucher Check No. 130 ..... $150.85
L. R. CURTIS, Attorney, Louisville
To legal services, January 1-July 1, 1934 ..... 150.00
To long distance call to Paducah ..... .85
150.85

July 31—Voucher Check No. 131 ..... $5.40
PHILIP F. BARBOUR, M. D., Louisville
To expenses for trip to Winchester for Dr Sherrill and self.

July 31—Voucher Check No. 132 ..... $8.04
BUSH-KREBS CO. Louisville
To 2 cuts.

July 31—Voucher Check No. 133 ..... $130.00
BRAKMEIER BROS., Louisville
To 1 Bronze Tablet, 21″ x 30″, "The Pioneer Physicians."

July 31—Voucher Check No. 134 ..... $3.27
RAILWAY EXPRESS AGENCY, Louisville
To express to Bowling Green, 6-15 and 26-34 ..... 1.23
To express from Bowling Green, 6-4, 6 and 28-34 ..... 1.94
3.27

July 31—Voucher Check No. 135 ..... $177.01
LOUISVILLE POSTMASTER,, Louisville
To postage, October 1933 through June, 1934

July 31—Voucher Check No. 136 ..... $14.91
WOMAN'S AUXILIARY, KENTUCKY STATE MEDICAL ASSOCIATION, Louisville
To 25% commission on advertisement amounting to 79.62 ..... 19.91
Less cost of 1 M envelopes ordered during year ..... 5.00
14.91

July 31—Voucher Check No. 137 ..... $536.94
TIMES-JOURNAL PUBLISHING CO., Bowling Green
To 2050—76 Page August Journal ..... 501.00
To Printing envelopes ..... 2.30
50.3.30
To 2500 Letterheads, Secretary ..... 10.00
To 250 Letterheads and 250 Envelopes, Councilor, 7th District 4.00
To 250 Letterheads and 250 Envelopes, Councilor, 11th District 4.00 18.00
521.30
Sales Tax ..... 15.64
536.94

July 31—Voucher Check No. 137-A ..... $47.00
HARRY S. SMITH Louisville
To reporting and transcribing minutes discussions, etc. at meeting of Eye, Ear, Nose and Throat Section of K. S. M. A., Louisville, May16 and 17, 1934.

Aug. 31—Voucher Check No. 138 ..... $135.00
A. T. McCORMACK, M. D., Louisville
To August salary, Secretary.

Aug. 31—Voucher Check No. 139 ..... $90.00
L. H. SOUTH M. D., Louisville
To August salary, Business Manager.

Aug. 31—Voucher Check No. 140 ..... $90.00
J. F. BLACKERBY, Louisville
To August services rendered Committee on Public Policy.

Aug. 31—Voucher Check No. 141 ..... $75.00
ELVA GRANT, Louisville
To August salary, Bookkeeper.

Aug. 31—Voucher Check No. 142 ..... $3.90
MAYME SULLIVAN, Louisville
To reimbursement for the following:
Long distance calls to Lexington and Harrodsburg, May 29, June 11, 15, and 16-34, regarding Medical Pioneer Bardstown June 20, about meeting at
Long distance call to Dr. Greenwell at Program at Harrodsburg ..... 3.50
Bardstown ..... .40
3.90

Aug. 31—Voucher Check No. 143 ..... $450.00
TIMES-JOURNAL PUBLISHING CO., Bowling Green
To account of September Journal.

TOTAL ..... $15,720.69



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## ORIGINAL ARTICLES

# REPORT OF MALPRACTICE SUIT

L. R. Curtis, Attorney,

Kentucky State Medical Association
Louisville.

On June 1, 1930, the patient's right femur was broken in the lower third, about five or six inches above the knee; there was also a fracture above and near the ankle, in addition to multiple contusions. The injuries were sustained in an automobile accident.

The patient was taken to a hospital at once, and placed in charge of the defendant physician. He was given a hypodermic, placed under an anesthetic, and an examination of the injured leg made with a fluoroscope. The physician claimed the fracture was then reduced and a Thomas Splint and Buck's Extension applied, with the application of weights in the usual and ordinary way, though the patient denied that any weights were applied, and in this, he was corroborated by several witnesses. The patient also claimed that no proper diagnosis was made and the bones were not brought together in apposition, and this testimony was corroborated by one physician, who, by the way, happened to be a relative.

There was a sharp contradiction as to what occurred after the patient was placed on the fracture bed, it being claimed by the physician and his witnesses that the patient pulled at the cast and moved his injured foot around with the aid of the other foot, thereby causing the weights to become dislodged and some of them to fall on the floor.

On the other hand, the patient denied having violated any orders or instructions of the doctor, and testified that he, at all times, was an "amiable, docile and submissive" patient, except he inadvertently admitted having retained a knife delivered to him for use at his meals, which he used to disturb and remove the plaster cast near the window over the incision.

Sixteen days after the accident, under the belief that no union was possible, due to the constant interference by the patient with the cast and weights, the physician did an open operation, using the Lane's Plate System.

Three x-ray pictures were taken, the first on July 1, showing the bone to be in excellent position; the second on July 20, showing the fracture to be in fair condition, but the third picture, taken on August 19, portrayed the parts of the bone displaced, overlapped and infected. The screws had become loosened and the plate itself not in position, though it was conclusively shown by the medical evidence that the reduction had been made in the usual and ordinary way and every precaution taken to prevent infection.

After the open operation was completed, the wound was dressed every day, sometimes twice a day, and after the infection appeared, the wound was drained and kept drained with tubes, irrigated, and the pus washed out with Dakin's Solution, to destroy the infection. Notwithstanding this treatment and these precautions, it was necessary to remove the ends of the bone, thereby causing considerable shortening.

Suit was instituted by the patient for $25,000.00, against the physician and the hospital. For the sake of accuracy, the grounds of alleged negligence are taken word for word from the petition.

"These defendants of their gross negligence and carelessness failed and neglected to properly diagnose said break or injury, and in their further negligence and carelessness, and as a direct result of their unskillful attempt to readjust and reset and co-apt said bones, the defendant, in whom it trusted to dress, treat and adjust said broken bone, wrongfully, improperly and unskillfully made an incision into his leg and made it necessary at a later date to cut off and remove a portion from the said broken bone and then of their further gross and careless, unskillful and improper, conduct, attempted to place and did place a silver plate across said broken joint and in his femur and attempted and fastened same by means of screws, and then bound up the same and left his leg improperly secured until said screws came out of said plate and bound and imbedded themselves within the flesh of his leg and remained there for many days. * * * The defendants injected or caused to be deposited within said broken or injured area foreign substance in addition to said plate and screws, * * * and thereby caused gangrene or pus to set up in said injured parts; * * * that after he left said hospital he was compelled on account of the negligent way and manner treated and left by this defendant, to undergo a second operation. * * * No proper diagnosis was made of said broken femur when he was first received in said hospital, or at all, by these defendants and same was grossly neglected for a period of some 16 or 17 days. No proper precaution or care was used in treating said broken limb, after which the defendant wrongfully, improperly and negligently made said open incision, thereby causing an infection of said limb. * * * As a result of said wrongs and injuries he not only suffered great mental and physical pains, and will continue to suffer, so long as he lives, but he had to expend for additional doctors' bills, etc."

The physician and other medical witnesses,

except one, testified that the injury to the femur was immediately diagnosed as a fracture; that the fracture was reduced on the same night of the accident and treated in the usual and oridinary way; that during the 16-day period, that is, from the time of the accident until the open reduction was done, the patient received the proper treatment; that the lack of union was due directly to the failure of the patient to obey instructions; that the infection which followed the open operation, was caused probably by the patient meddling with and handling the cast at the point of incision, though the patient even denied that the physician had left a window in the cast.

The patient censured the physician, too, for going out of town for a few days, to attend a medical meeting, while his leg was in the cast, leaving him in charge of one of his assistants. Negligence was not predicated on the failure of the physician to be constantly in attendance, yet that incident was drawn into the case, probably for its effect upon the jury.

The Court of Appeals held it to be a matter of general knowledge that after a broken leg, such as was sustained by the patient, is set, and the Thomas Splint and Buck's Extension applied, the patient does not require the continuous presence of a physician, if he abides by the instructions of the nurse and physician, and reasonably co-operates with them; that in such a case, the physician is negligent only in allowing intervals to elapse between visits to his patient, where attention is needed. Said Court, in reversing the judgment of the lower court, which was for a substantial amount, against the physician, and in holding that the Circuit Court should have peremptorily instructed the jury to find for the defendant, among other things, said:

"Upon consenting to treat a patient, it becomes his duty (the physician or surgeon) to use reasonable care and diligence in the exercise of his skill and the application of his learning to accomplish the purpose for which he was employed. He is under the further obligation to use his best judgment in exercising his skill and applying his knowledge. The law holds him liable for an injury to his patient resulting from want of the requisite knowledge and skill, or the omission to exercise reasonable care, or the failure to use his best judgment. The rule in relation to learning and skill does not require the surgeon to possess that extraordinary learning and skill which belong only to a few men of rare endowments, but such as is possessed by the average member of the medical profession in good standing. Still, he is bound to keep abreast of the times, and a departure from approved methods in general use, if it injures the patient, will render him liable, however good his intentions may have been. The rule of reasonable care and diligence does not require the exercise of the highest possible degree of care, and, to render a physician and surgeon liable, it is not enough that there has been a less degree of care than some other medical man might have shown, or less than even he himself might have bestowed, but there must be a want of ordinary and reasonable care, leading to a bad result. This includes not only the diagnosis and treatment, but also the giving of proper instructions to his patient in relation to conduct, exercise, and the use of an injured limb. The rule requiring him to use his best judgment does not hold him liable for a mere error of judgment, provided he does what he thinks is best after careful examination. His implied engagement with his patient does not guarantee a good result, but he promises by implication to use the skill and learning of the average physician, to exercise reasonable care, and to exert his best judgment in the effort to bring about a good result.

"A physician can be held liable only for such injuries as are shown proximately to have resulted from the failure on his part to perform the duty which he owed to his patient; if the injuries for which recovery is sought are shown to have resulted from negligence on the part of the patient, either alone or simultaneously and in co-operation with the alleged negligence of the physician, then the patient has no right to recover damages from the physician; 'but where a physician has been guilty of negligence resulting in injury to the patient and the patient subsequently, by his own want of care, aggravates the injury sustained primarily at the hands of the physician, the physician will be liable only for the injury proximately resulting from his own negligence, and not for the aggravation caused by the negligence of the patient.'

"The law as it relates to the physician or surgeon neither exacts omniscience nor imposes the onerous responsibilities of the insurer. He is liable only in the performance of his services if he either did some particular thing or things that physicians or surgeons of ordinary skill, care, and diligence would not have done under the same or similar circumstances, or failed to do some particular thing or things, which physicians or surgeons of ordinary skill, care, and diligence would not leave undone under the same or similar circumstances. * * * He is bound to bestow such reasonable and ordinary care as learned and skilled physicians and surgeons

in similar neighborhoods engaged in the same general line of practice ordinarily exercise in like cases.

"The failure to effect a cure or to obtain the result expected by the patient does not raise the presumption of a want of proper care or a lack of skill and diligence, nor create an inference of incompetency or negligence. A physician is not responsible for the erroneous exercise of judgment provided he informs himself of the facts by proper investigation. The presumption of negligence is never indulged in from the mere evidence of mental pain and suffering of the patient, or from failure to cure, or poor or bad results, or because of the appearance of infection. The doctrine of res ipsa loquitur, (the thing speaks for itself), has no application in such cases, but the burden of proof is upon the patient to prove the negligence of the physician or surgeon and that such negligence was the proximate cause of the injury and damage. The facts necessary to establish a cause of action against a physician or surgeon for malpractice, can only be proven by experts, skilled in medicine or surgery, qualifying to testify where the matter in issue is exclusively within the knowledge of experts. The right of recovery cannot be established by the testimony of laymen unless the subject matter involved is common knowledge or ascertainable by non-expert's senses."

"Infection is an elusive, implacable, ever present enemy of the surgeon. It may and does occur, inexplicably, in the best regulated hospitals and under the most favorable conditions, even though the surgeon might have used the highest degree of care and skill. When it does appear, naturally it is hard to control and there is often a necrosis of the bone and the screws in the bone will become loose, and for bones to remain in apposition, and to avoid infection, the patient must give to the physician the fullest co-operation; but in cases where such co-operation is given it is always possible for the ends of the bones to slip and for infection to occur, notwithstanding the greatest care and skill on the part of the physician.

"Whenever the patient is intractable, unmanageable and non co-operative, or removes such forms of dressings, it is not unusual and the chances are it is imperative to perform the "open operation;" i. e., making an incision through the skin and soft structure, exposing the bone at the points of fracture and introducing some foreign substance, such as gimlets, wires, nails, beef bone pegs or bone grafts or screws into the bone substance itself, in order to maintain an internal fixation at the points of fracture in the bone, so that nature may heal the injury. The presence of infection following an operation is neither prima facie evidence of, nor per se, negligence, and the fact that infection did appear is no evidence in and of itself, of negligence of the physician.

"A recovery will not be allowed a patient where he is in pari delicto. All parties participating in moral delinquency or turpitude are termed pari delicto. The patient's intermeddling with the treatment of the physician, and the nurses, amounted in fact to a prevention of a proper treatment of his limb, therefore it is a mere matter of conjecture, surmise and speculation, even if the negligence of the physician be conceded, whether the patient's acts and conduct were the proximate, the concurrent, or the efficient cause of the injury. On the evidence adduced, even conceding, for the sake of argument, the alleged negligence of the physician, it would be a mental impossibility for a jury to determine whether the cause of the patient's mental and physical pain and injury was due to his own acts or the alleged negligence of the physician.

"This fact brings the case within the familiar rule that, where the evidence is equally consistent with any one of two or more states of cases upon which one may theorize as to the cause of an accident, it is not competent for the Judge to leave the matter to the jury. When the whole evidence is tested by the principles reiterated above it is a matter of mere conjecture, surmise or speculation whether the mental and physical pain and injuries for which the patient sues were the proximate result of his own acts, either alone or simultaneously and in co-operation with the alleged negligence of the physician, especially in view of the accepted rule, that the negligence of the physician can only be established by the testimony of experts. Conjecture, surmise or speculation are insufficient upon which to rest a verdict of a jury, therefore the court should have given peremptory instructions to find for the defendant herein."

As to the Hospital, the Court held that no liability attached to it, because the fact that the surgeon was largely in control of the hospital, did not render it liable for his alleged negligence to a patient therein.

I might say, in passing, that the Courts seem to be harmonious in their rulings that where a hospital contracts to furnish hospitalization, and uses reasonable care in the selection of a physician or surgeon, selecting one of good standing in his profession, it has fulfilled its obligation to the patient and cannot be held liable for the alleged acts of negligence of the physician.

In discussing the above case, I have purposely omitted all names. This decision is a

re-statement of part of the law of Kentucky on the question of the obligation of a physician to his patient and vice versa. It is of such importance to the Medical Profession, generally, that Dr. McCormack asked me, as attorney for the Kentucky State Medical Association, to review the facts briefly and to set forth the pertinent parts of the decision, which was and is a complete victory for the physician.

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## SOME IMPRESSIONS OF ENGLISH SURGERY GAINED ON A RECENT VISIT

Fred W. Rankin, M. D.

Lexington.

It is always pleasant and frequently instructive to visit other clinics particularly those of our foreign colleagues. To exchange views, to observe other surgeons' methods of attacking situations similar to those which confront us, and to compare their approach and judgement, is informative and worth while. Likewise, such visits make for a better appreciation of our own problems, and establish a contact between foreign surgeons and ourselves which should be mutually advantageous.

When I received an invitation some months ago to address the Sub-Section of Proctology of the Royal Society of Medicine in London, I accepted, glad of the opportunity to renew friendships, multiply acquaintances, and observe, albeit in a very short time, as much British surgery as was possible. The members of the Sub-Section of Proctology are surgeons who first were either experienced in general surgery and secondarily confined their work to diseases of the colon and rectum, or are general surgeons at the present time who are particularly interested in this branch of work.

Proctology in England is thus largely in the hands of experienced and qualified members of the Royal College of Surgeons. The meeting of this section was particularly interesting to me not only from the standpoint of the subject under discussion, namely, "Cancer of the Colon," but from the manner in which it was handled. A guest is invited to "open the discussion" on a selected subject. This corresponds to our custom of reading a paper, and at this meeting an hour was allocated for the "opening of the discussion." Subsequently the problem was discussed by a number of men to whom this part of the program had been designated.

Mr. Ernest Miles, that distinguished surgeon who has contributed more, I believe, to the establishment of fundamental principles of surgery for cancer of the rectum than any other one man, was the presiding officer at this meeting. Sir Charles Gordon Watson, Mr. J. P. Lockhart Mummery, Mr. W. B. Gabriel, Mr. Gordon Taylor, and Mr. A Lawrence Abel were among those who discussed the subject after my presentation.

The courtesy, facility of expression, and authority with which these surgeons handled the subject was most impressive to me and illustrative of the type of thorough fundamental knowledge which their education insures.

There were many things to impress me since my last visit to England five years ago, not the least of which was the general morale of the country and the appearance of stabilization. That this was evident in the hospital situation and in general medical work could not be denied. The evolution which has already taken place in hospitalization in Great Britian, and the rapidity with which it is now taking place, struck my attention vividly.

There are in London 112 hospitals, most of which of course are teaching hospitals. These institutions are supported by various subscriptions, grants, and gifts and formerly housed charity patients only. Private cases were operated upon at the so-called "nursing homes" which are scattered throughout London. Consequently, the distinction which one frequently sees in papers by English surgeons, of "hospital cases" and "private cases" is understandable.

The marked improvement in physical equipment which all of these big hospitals of London that I was privileged to visit showed, made a deep impression on me. Unquestionably, there has been great progress made in replacing old equipment and in modernizing in many respects, the buildings. Another thing which I think indicates perhaps as much as any other element the evolution of the British hospital scheme is the fact that in many of these hospitals are now found pavilions being erected for private cases. This trend to bring private cases under the same roof and to concentrate surgery as we do in this country, is spreading and soon I think, will be uniformly accepted throughout London. As far as I could make out there is scarcely any opposition to this method among the profession, since the surgeons realize the advantage of having both private and charity cases in the same building, and the laity, slow usually to break away from old traditions, is accepting the situation more quickly than one would think.

The private nursing homes are, I must confess, quite satisfactory private hospitals. True, the operating theaters are somewhat small and cramped, and the nursing facilities are not as satisfactory as we recognize them in this country; yet, one could not deny

that in the better types of nursing homes that I saw, facilities are adequate and save for the inconvenience to surgeons of having patients in a number of hospitals scattered throughout a large city, this particular type of hospitalization should not, I feel, be condemned as severely as I have heard it. The trend to combine private and charity practice is however, as I say, a strong one, and I believe that the immediate future will see further steps in this direction.

Mr. Miles permitted me to visit both his public and private clinic, and I was greatly benefited by the experience. His remarkable dexterity, his clever handling of the whole situation, as well as his judgment in the selection of cases, was very enlightening. The application of the principles which he has laid down for resection of the rectum to a large group of cases of course, requires extremely accurate and careful selection, but the statistical data of the ultimate results are too convincing to be questioned.

I saw Mr. Miles and his associate, Mr. A. Lawrence Abel do four combined abdomino-perineal resections while I was in London. In none of these cases was the operating time over an hour and fifteen minutes. In two of the cases the time was forty-five minutes.

The preliminary preparation for these operations is considered by them as being even more important than has been our custom. I noted that they spend at least a week in decompressing these patients' colons, rehabilitating them as we do at the same time, and in addition administering Dimol, an antiseptic, by mouth and irrigating the bowel with another antiseptic, Dettol.

Their selection of cases is particularly interesting to me. Naturally, one has to be extremely careful in choosing cases to stand this formidable procedure and at the same time have other types of surgery available for those not deemed fit, and in consequence, great attention is given to the presence or absence of co-existing debilitating diseases, such as cardio-renal vascular diseases, nephritis, etc. Kidney function tests are made on all cases and an estimation of the cardiac reserve is deemed essential and great stress is placed upon it.

Mr. Miles has now done over four hundred of these combined abdomino-perineal operations by his technique, and his statistical data on five-year cures far surpasses that of any other operative procedure. Therefore, there seems to me to be small question of employing it when it may be selected with safety. His mortality figure runs around, or a little below ten per cent, but his operability figure is low. Operability of about thirty per cent, or one out of three cases as he sees them, seems about the average. I think that is perhaps about as high an operability as one will find for this operation, leaving then, about the same number of cases which must be operated upon by the two-stage method or by colostomy and posterior resection, or by some of the other less radical extirpative procedures.

St. Mark's Hospital deserves especial mention in that it was founded by Frederick Salmon, who was particularly interested in diseases of the rectum and who in 1835 opened an institution which was named, "The Infirmary for the Relief of the Poor, Afflicted With Fistula and Other Diseases of the Rectum." Seven beds were made available at its opening and there is on record a report of 131 cases admitted during the first year's work, of which number, 34 were cases of stricture of the rectum, and 26 were cases of piles.

The present site of the hospital was purchased in 1854 and the name was changed to "St. Mark's Hospital." Salmon's ligature method of removal internal hemorrhoids is still widely practiced not only at St. Mark's, but throughout England. I am told that it is quite satisfactory and certainly it is easily accomplished.

At this hospital Mr. Mummery, the chief surgeon, is known as an advocate of colostomy and posterior resection for cancer of the rectum. This operation has been performed by him with the extremely low mortality of three per cent in a selected group of cases and I believe has a field of usefulness in dealing with malignancies of the ampulla of the rectum, and in certain cases where the condition of the patient does not permit a radical procedure. However, it is becoming more and more widely recognized that cancer of the rectum requires a radical operation which removes the glands in the mesentery of the sigmoid and furthermore, that individualization of cases likewise is an essential part of the program and that no one type of operation fits all cases. As a result, the perineo-abdominal resection is being done more and more at St. Mark's; a procedure which to my mind, has many points in its favor.

This operation was first undertaken in England by Grey Turner of Newcastle-on-Tyne, and now Mr. Gabriel is an advocate of its employment. The operation begins with a small abdominal incision for exploration of the liver and glands. In the event that the exploration is negative, the abdominal incision is loosely closed and the patient turned on his side and the mobilization of the rectum is accomplished from behind. The patient is then turned on his back and the segment removed through the abdominal incision which is re-opened and enlarged, and the colostomy established. There is considerable evidence to the end that the

shock is less when the mobilization is from behind forward. I can corroborate this statement because my own two-stage operation for combined abdomino-perineal resection of the rectum has convinced me of the fact very forcibly. By doing the operation in two stages, or by substituting for it a cecostomy and perineo-abdominal resection in two stages, I have been able to cut my own mortality to less than ten per cent for the radical procedure.

Of particular interest to me was the very splendid pathology department under Dr. Cuthbert Dukes. Dr. Dukes is a very progressive and forward-looking pathologist and his records and methods of grading cancers are very modern and efficient. This pathology department of St. Mark's Hospital compares favorably with that of any hospital I have ever visited and I think that Dr. Dukes' work on adenomatosis, particularly its hereditary factors as well as his work on cancer of the rectum, stamps him as among the foremost pathologists not only of England, but of the world.

I was privileged to visit in addition, the London Hospital, the Cancer Hospital, and St. Bartholomew's, and in all of the places I was impressed by the modernization of equipment and progressive ideas which has marked the passing of the last one-half decade.

St. Bartholomew's Hospital, or "Bart's", as it is familiarly known to all visitors to London as well as to the Staff, continues to be one of the outstanding surgical units of the continent, and to maintain its traditions of centuries. Here too, one finds that changing times have advantaged the hospital. Recent progress in hospital organization, and modernization of equipment are in evidence here, and the high standard of work under eminent surgeons for which the unit is famous, is maintained. The enormous variety of work, as well as the organization of the service, provides great numbers of interesting cases and affords ample clinical material for teaching purposes.

A separate and distinct full-time teaching unit is maintained at St. Bartholomew's under the direction of Professor Gask, a courteous gentleman, a delightful lecturer, and a splendid surgeon. Duplication of this unit in other teaching centers in London is being undertaken either with the identical organization or with modifications to fit local conditions.

Another institution which is new to London in recent years and which is a product of this period of evolution, is the London Clinic and Nursing Home, situated on Harley Street. This is a unit which I feel somewhat epitomizes a type of practice of medicine which in coming years will be prevalent in this country. A building where physicians and surgeons may have their consultation rooms in close proximity, yet without business association, is the key to the structure. Above the floors is a hospital-hotel arrangement whose operating theaters are on the top floor and the intervening space is taken up with hospital rooms. In other words, here is a complete hospital and office building where one's work may all be done under the same roof and yet where the physicians and surgeons practice individually. They do not own this building but rent the office space from a holding company, and of course the hospital rooms pay their own way, providing only that patients are furnished in sufficient numbers.

Such an arrangement relieves the profession of the financial burden of running a large building, permits private practice in close cooperation with other consultants and at the same time allows a group of men, not too closely bound together financially, to direct the policies of the institution.

In this clinic are many distinguished surgeons, among them Sir Harold Gillies, Sir Thomas Dunhill, Mr. A. James Walton, Mr. Mummery, Mr. McIndoe, Mr. C. Naunton Morgan, and many others. To me, the arrangement seems ideal and I would not hesitate to prophesy that such units will be developed in this country in the future, either along the exact lines of this particular institution, or with an already established hospital as the basic structure.

My friend, Mr. McIndoe, is associated with Sir Harold Gillies and limits his practice to plastic surgery. Sir Harold, an internationally known plastic surgeon, has, I take it, done as much as any one man to forward this particular branch of the surgical art. His war reputation is known to all and his subsequent work has increased his already wide reputation. An opportunity was given me to see these men do a number of plastic operations and I was very much impressed with their methods and technique. They have a huge volume of practice and demonstrate sucessfully that plastic surgery as a specialty is a very wide field indeed.

During this visit I determined to observe closely methods and kinds of anesthesia, for it is a question which to me seems still not too satisfactorily stabilized in this country.

The administration of anesthesia, and the selection of types of anesthesia in England follows relatively the lines of progress that we are accustomed to in this country, but with some notable differences. I did not see ethylene used at all, nor was avertin being administered in any of the clinics or hospitals which I visited. I was told that avertin was used

however, occasionally, but no mention was made of the other agent.

The anesthetists are all physicians, usually members of the Royal College of Physicians and not only are proficient in the administration of the anesthetic agent, but the majority of them apparently are quite enthusiastic over research in, and the physiology of, anesthesia.

In Mr. Miles' and Mr. Abel's clinics I found spinal anesthesia with supplementary gas-oxygen inhalation anesthesia being used routinely for resections of the large bowel and rectum. Dr. Jarman, their anesthetist, uses a small dose of spinal anesthesia, and immediately upon administration of it, starts an inhalation anesthetic of gas and oxygen. This type of anesthesia was preceded by premedication of onmopon, gr. 2/3, and scopolamine, gr. 1/150, and occasionally supplemented with evipan. Percaine was the anesthetic agent used for the spinal, although occasionally spinocain came into service. The claim for percaine is that it is less toxic and affects the blood pressure less than other members of this group (spinocain, stovocain, etc.), while In the former, the dose is 20 c. cm. of a 1 to ing effect covering from one to three hours. It is utilizable also as a local infiltration anesthetic. For spinal anesthesia percaine is used in two strengths—the dilute and the strong. In the former, the dose is 20 c. cm. of a 1 to 1,500 solution, and in the strong it is 2.3 c. cm. of a 1 to 200 solution. The dilute solution is usually employed.

Mr. Jarman tells me that he never supplements these agents with ether, and of course, chloroform has been abandoned in England as it has here. For radical rectal operations one noticed especially the relaxation, and the lack of difficulty and complications experienced. The selection of cases for this type of anesthetic however, as well as for this type of operation obviously is a very close one.

Great attention is paid to the circulatory status of the individual, particularly the pulse pressure and cardiac energy index as is evidenced by the Moot-McKesson formula. This formula is as follows: Moot's index

$$\frac{\text{pulse pressure} \times 100}{\text{Diastolic pressure}} = 50$$

(in normal subjects). Patients presenting an index of between 40 and 60 show ample cardiac reserve while those whose index lies between 25 and 40, or between 60 and 75 have a probable adequate reserve. When the index is below 25 or above 75, the reserve is gravely inadequate. Because of the high pulse pressure in thyrotoxicosis, obviously this index would not hold good for such cases.

Intra-tracheal anesthesia is being used to some extent in goiter work, while local anesthesia here finds a distinct place both as a basal, or supplemental agent. In plastic surgery many of the operations are done under local injection of novocain with occasionally general inhalation anesthesia or rectal anesthesia, or intravenous evipan being used.

Intravenous evipan is used as an anesthetic especially for short operations, and as premedication to anesthesia. It is one of the barbiturates and apparently is the least toxic of all. Minimum doses of evipan intravenously administered are used for such operations as dental extractions, the opening of abscesses, the removal of specimens for biopsy, etc. Where an operation such as hemorrhoidectomy, or some type of surgery which requires deep anesthesia, is contemplated, evipan combined with some premedication, which I was told was usually omnopon and scopolamine, frequently is given.

There are obviously a number of contraindications to its use, in the main those things which we find in this country contraindicating the use of amytal as a general anesthetic. Having gone through the early amytal period, I was a little loathe to be too highly enthusiastic over any intravenous type of anesthesia, but I was assured by several of the British anesthetists who had utilized it over 1000 times each, that properly administered in properly selected cases, it may be considered a very safe agent either as a pre-anesthetic adjunct, or as a general anesthetic itself in combination with proper premedication.

The time limit on my visit abroad compelled me to forego visits to other hospitals in London such as Guy's and Middlesex, and such other world-renowned institutions which would have increased an already delightful experience, I am sure. Likewise it was impossible to attend clinics in Scotland and Ireland, and indeed in other parts of England than London. It was with not a little regret that I missed seeing Grey Turner at Newcastle-on-Tyne, and Fraser, Wilkie and their associates at Edinburgh, because my former visits to their clinics had been most delightful and instructive.

Also, I was not privileged to see Lord Moynihan of Leeds at work again. He, after a considerable number of years spent in London, has returned to his former home at Leeds, relinquishing his activities which included not only a large private practice, but responsible duties as President of the Royal College of Surgeons for many terms. Returned now to Leeds, he continues to live tranquilly, indulge his hobbies, and engage mildly in private practice, thus enjoying a well-earned rest from his varied and long-continued activities.

Both the medical meeting and the visits to the clinics and hospitals which I have outlined above, combined to make my visit a most stimulating and profitable one to me, even though it was necessary to crowd so much into such a short space of time. I returned home with a feeling of even greater admiration for our British colleagues, and a determination to renew acquaintances with them at shorter intervals in the future, if possible.

## THE RELATION OF DIET TO DENTAL CARIES*

T. J. Marshall, M. D.

Paducah.

A careful study of all available reliable data, according to the White House Conference indicates that about 95 per cent suffer from dental caries. In the past, efforts to control caries have consisted in replacing carius areas by fillings, and oral hygienic measures, while these proceedings have an undoubted effect upon general health and comfort they seem to have failed to a great degree in preventing the development of caries. In an attempt to arrest and prevent caries, research on animals and in some instances, carefully controlled dietetic measures among children have been carried out with notable results. An extension of reparative and hygienic measures is needed, but further study of the underlying causes is of great importance. Laboratory and clinical experience indicate that these causes lie within the field of metabolism which may be regulated by dietetic control. Until recently the cause of tooth decay was thought to depend entirely upon the effect of bacteria, later it was thought that dental decay was caused by the action of acid growth products of certain organisms, resulting in decalcification and subsequent destruction of the tooth substance, and it was thought that a clean tooth never decays, however clean teeth have decayed. While some dentists were advocating the avoidance of starches and sweets, as these were thought to stick to the teeth and harbor acid producing organisms, when by the use of a food of a fibrous nature the teeth would be scoured of the sticky debris; they were really eliminating faulty diets and supplying a more proper diet for the patient. Marritt states that the character of the anlage is determined chiefly by evolutional heredity, and that any alteration is beyond our control. We are however, in position to control, to a considerable extent the supply of nutritive materials and the conditions which allow for their deposition. The most important means at our disposal for accomplishing this, is the proper regulation of the diet.

It is well known that the need of the body for protective foods may be greater under some conditions than others. This is obviously true in the case of pregnancy and lactation. Dental caries in the expectant mothers is out one symptom of the lack of adequate calcium, phosphorus and the vitamins, without which the fetus cannot be expected to thrive and develop normally.

Todd states that expectant mothers, suffering from lack of minerals and vitamins in the diet, produce children already handicapped in developmental growth at birth, while Marriott says the diet of the mother during pregnancy exerts an influence upon the development of the teeth, as the development of these begins early in intrauterine life, and the lime salts are deposited in the crowns as early as the 6th or 7th months of fetal life, so at the time of birth all the temporary teeth are calcified; hence the teeth of the developing fetus appropriate calcium, phosphates and other minerals from the maternal blood, even though this leads to a depletion of the mother's blood and other tissues. Deficiencies in diet are more likely to affect the mother than the developing fetus, unless the deficiencies are too great, then both the fetus and mother are affected.

E. Millanby found that puppies born of mothers whose diets during pregnancy were deficient in Vitamin D had deciduous teeth in which the enamel was poorly developed, and the dentine contained interglobular spaces. Toverud found the same results in rats while Marshall found structural changes in the offspring of pregnant animals whose diets were deficient in Vitamin A, and these changes observed rendered the young animals especially susceptible to caries in later life. Neff observed changes in the deciduous teeth of infants and young children which pointed to dietary deficiences during the early development of the teeth.

Even though all is well during the period of gestation unless the infant receives the proper diet, the structure of the temporary teeth, which are fairly well formed at the time of birth, as well as the development of the permanent teeth may be profoundly influenced. If the infant is breast fed and the mother is healthy and is taking an adequate diet, the infants teeths will develop normally, as all the necessary materials for the development and maintenance of the teeth will be supplied in such breast milk. In addition to the food elements, fats, carbohydrates, protein and minerals, the diet must contain the vitamins, especially Vitamins A, D and C, for the proper development of the teeth. The lack of particular elements in the

*Read before the Southwestern Dental Society.

diet result in nutritional disorders, some of which influence the development of the teeth, for instance, rickets which is a general nutritional condition, but affecting especially the bones and the teeth. In rickets the teeth erupt late, the enamel is of poor quality and the dentine is of irregular structure and the teeth are set in the jaws irregularly. Not only are the temporary teeth affected, but the permanent teeth also, especially the 1st molars and incisors.

Lack of Vitamin A causes changes in the mucous membranes, including those of the mouth, which render them susceptible to infection, also, there is a retardation in the growth of the jaws and consequently an irregularity of the teeth. According to Marshall the pulp cavities become degenerated and inflamed and the odontoblast lay down bone instead of dentine. Todd concludes that Vitamin A keeps the mucous membranes in health. Depletion of this vitamin is registered in roentgenograms of the teeth. Howe in experiment on guinea pigs, has found decalcification of the teeth and alveolar processes, changes in the pulp, and loosening of the peridontal attachments—when there is a deficiency of Vitamin C in the diet. Hanke has noted the frequent occurrence of caries, pyorrhea, and mouth infection in human beings whose diets are deficient in Vitamin C. So far it has not been proven that temporary deficiency in Vitamin C in the diet during infancy results in any permanent changes in the structure of the fully developed teeth, but any condition due to lack of Vitamin C is promptly relieved by the administration of orange juice or some anti-scorbutic. May Mellanby concludes that the problem of dental caries and periodontal disease is fundamentally a problem of nutrition. As the tooth is composed to a larger extent, of calcium and phosphorus, and it has been established that Vitamin D is essential for the optimal utilization of these elements in the body, therefore, an adequate supply of Vitamin D to the diet is necessary for the prevention of dental caries in diets containing all the other elements.

If the infants diet is poor in protein, the teeth develop slowly, and erupt late; but so far as is known, there are no structural changes found in the teeth.

Carbohydrates cause damage to the teeth only when they comprise such a large portion of the diet that inadequate amounts of other foods containing minerals, vitamins, etc., are taken. Marriott states that infants fed on a high carbohydrate diet and are deficient in other particulars, often develop rickets with the changes noted in the teeth as well as elsewhere.

Boyd and Drain found that diets complete in all the recognized essentials would arrest the progress of dental caries in diabetic children, and it has been further shown that similar results can be obtained in other children and that tooth decay is dependent upon the inadequacy of the diet in certain essentials and when these essentials are supplied it is found that no foods in themselves are harmful to the teeth.

It is claimed by many that the most practical measures for the control of caries consist in dietary regulations by which the teeth are increased in calcification. Bunting concludes from experiments on 433 children that dietary measures appear to be the most important of the methods employed for the care and prevention of tooth decay.

In a study of the Ancient Egyptians, Elliott Smith found that dental caries and alveolar abscesses were common in the well to do classes that lived on luxurious diets, while the poorer classes that lived on coarse, uncooked diets were relatively immune to these diseases.

The fact remains that if a child ingests a diet which contains all the elements that are recognized as necessary for health in general, the health of the teeth will be safeguarded as well.

Langstroth concluded from a careful study, that the American dietary is composed largely of concentrated food, is low in vitamins, residue and alkaline minerals, and is high in carbohydrate and acid minerals.

Diversity of diet does much to forestall the development of deficiencies; stereotyped menus increase the danger unless adequate provisions are taken in their formulations. The deficiencies in diet are potentially of greater significance than they were a few generations ago when most foods were eaten without much processing and a variety of foods was served at each meal.

From this review of the recent literature, one may conclude that the diet of the pregnant mother influences the development of the teeth during intrauterine life.

That the development and structure of both the temporary and the permanent teeth are largely influenced by the character of diet during infancy.

That vitamins, especially A C and D must be supplied in the diet in sufficient quantities for normal development and structure of the teeth.

That an adequate intake of calcium and phosphates is essential, which is usually insured in the milk ingested.

That as soon as the first teeth erupt, the infant should have something to chew on, as chewing tends to develop the jaws as well as

cleaning and polishing the teeth.

That even though the teeth may be well developed as a result of proper diet during infancy these well developed teeth will not remain healthy unless the diet continues to be adequate throughout life.

That the teeth are live tissues which can be maintained in healthy condition only when nutritional needs are met adequately.

That there is increasing evidence that with proper diet dental caries may be largely controlled, whereby improper, or deficient diet will bring about dental decay.

That mere mechanical cleaning the teeth will not prevent nor cure caries.

And finally Apt says "The cause and alleviation of dental disorders require the intensive study of pediatricians and dentists alike. Not only the pediatrician, but also the dentist is interested in those biologic problems, local as well as constitutional, which assist in solving the problem of prophylaxis of dental disease."

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## SUB-TERTIAN MALARIA; A CASE CURED WITH PLASMOCHIN*

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Princeton.

Sub-tertian malaria is estivo-autumnal malaria, and is called sub-tertian because it has a tertian periodicity in its development similar to regular benign tertian malaria. It is also called malignant tertian because most malignant or pernicious cases of malaria are of this type. The name estivo-autumnal indicates that it is most prevalent in the summer and autumn months. It is due to the Plasmodium falciparum and occurs chiefly in the warmer regions of the tropics and subtropics. In the eastern half of the United States it is endemic in the Gulf States and in the Mississippi Valley, although it is not nearly so common as the regular tertian and quartan types.

The following case is of interest because (1) it suggested undulant fever, (2) it showed some improvement on quinine, but none on atabrine, and (3) it yielded completely only to plasmochin.

The patient, M. J. B., age seven, became ill with chills and fever early in August, 1933. She was treated immediately with a liquid quinine preparation (two grains per dram). She was cared for by her mother, who gave her regularly one teaspoonful every three hours for two days, then one every four hours for several more days. Off and on, treatment was repeated for several days at a time. During August and September, she took a total of sixteen ounces of the quinine preparation (256 grains of quinine). The result from the beginning was a decline in the chills and fever, the patient often going from three to five days without any apparent elevation of temperature (it was not taken regularly). Eventually the chills stopped and the fever developed an undulating course.

On October 6 she was taken to Evansville, Indiana, for examination, especially since she had had previous trouble with her tonsils which had recurred at that time. The laryngologist consulted, stated that he did not consider the tonsil trouble serious nor sufficient to explain the irregular, undulating fever. A fresh blood smear was examined for malaria, and was negative. Other blood examinations included the Wassermann and Kahn tests, and the agglutination reaction for undulant fever, all of which were negative. The hemoglobin determination was 55 per cent, the red cell count 4,250,000 and the white cell count 15,800.

On October 8 she came under my care. At the time of examination (3:00 p. m.) she had an oral temperature of 102.3 F. which had not been preceded by any apparent chill. Her tonsils showed considerable enlargement, with swelling, firmness and some tenderness of the external lymph nodes on each side. There was a faint systolic murmur, probably due to the anemia. The spleen was not palpable, and there was no tenderness over the splenic area. She did not appear acutely ill.

She was observed carefully during the next few days for all clinical clues to the cause of her illness, as I felt that it was not malaria because of the leucocytosis, the negative examination for plasmodia, the absence of splenic tenderness, etc. During this time the fever ran an undulating course, distinctly suggestive of undulant fever. The rises in temperature came on at irregular intervals and were not preceded by chills. There was a history of milk having been used from a cow that had "lost her calf." A tentative diagnosis of undulant fever was made and two intravenous injections of Metaphen 1:1,000 were given (4 c. c. and 8 c. c.) with four days intervening. This treatment was given following Fortney's article in which he recorded cure of a case of undulant fever with Metaphen 1:1000; and because there was no more promising therapeutic measure available. There was no change.

A specimen of blood, taken on October 17, was examined at the Public Service Laboratories, Lexington, and reported negative for Paratyphoid Alpha and Beta and for undulant fever. Typhoid agglutination was positive in a dilution of 1:40. That was ex-

*Read before the Caldwell County Medical Society.

plained by the fact that she had been vaccinated against typhoid in August, 1932.

A dried blood smear was later reported negative for malaria.

Meanwhile the patient developed abdominal discomfort, often with nausea and vomiting, preceding her rises in temperature. On October 21 she had a definite chill, followed by fever up to 104 F. A diagnosis of malaria was then made. From the previous result with quinine it was considered inadequate for further therapy.

On October 21, atabrine (three-fourths grain three times a day) was started and was given for five days. That is the amount and the duration recommended as an adequate routine for children for all types of malaria except the sub-tertian type. There was no change in the patient's fever or illness. The temperature rose to 103 or 104 F. daily.

On October 26, plasmochin (one-twelfth grain three times a day) was started and was continued for fifteen doses. After five doses there was a distinct change: the fever dropped, and at no time during the remainder of the treatment did it go above 100 F. On completion of fifteen doses the temperature was 99.5 F. Six days later the daily temperature was within normal limits and has remained so since. She recovered completely.

The case was undoubtedly one of subtertian malaria. The conclusion was reached because of (1) the partial response to quinine, (2) the total lack of response to atabrine, and (3) the complete response to plasmochin.

Published reports show that atabrine is reliable treatment for malaria, except the subtertian type, and that plasmochin is specific for sub-tertian malaria. (Both products are distributed by the Winthrop Chemical Company, New York City). The limitations of quinine are well known. With the development of atabrine and plasmochin the treatment of all types of malaria has apparently become more simple because it has become more effective and more reliable. Without plasmochin it is probable that this case would have become chronic and incurable.

Mayne and Wenyon have shown that anopheles mosquitoes can be infected with Plasmodium falciparum from patients taking quinine, but that infection rarely follows in such tests with other plasmodia. That shows the marked resistance of Plasmodium falciparum to quinine, which explains why quinine treatment is so commonly ineffective in malaria of this type. The previous use of quinine, however, probably explains the failure to find the parasite in the periperal blood in my case.

## INSULIN TREATMENT IN THE PROMOTION OF GAIN IN WEIGHT*

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Louisville.

Too often we are prone to neglect or at least minimize the symptoms of that group of patients who have no demonstrable organic lesions and who are seen only too frequently in every doctor's office because of general malaise, inability to stand their daily routine without marked fatigue; in other words their constitutional deficiency is enough of a handicap to prevent a useful life. It is principally regarding the management of this group that we refer to in this article, although what is said here may be applied to the chronic tubercular, those with chronic colitis, gastric atony and especially that group of patients classed as the vagatonic.

That Insulin has been useful in adding weight to an undernourished individual with diabetes was an early observation following Banting's work and those who have treated diabetes have been able to regulate to a large extent the weight of the individual diabetic. But not until ten years later in this country was any definite work done in using Insulin in the non-diabetic individual. Although as early as 1925 Falta in Germany made an extensive study along this line and later other observers reported results that bore out his work.

Joslin observed very early that the gain in weight of the diabetic was one of the first improvements even after a few doses of Insulin but his first observation was that the gain closely resembled the so-called dystrophic adiposa-genitalis, and he attributed it to an endocrine action. At that time it was not considered altogether favorably although no untoward effects were reported.

In recent years and especially recent months our literature is showing more and more interest in this line and a review shows some of the earliest work reported to have been done by Metz of Detroit and Nahun and Himwich in the American Journal of Medical Sciences in May, 1932. Since then almost all of our leading journals report encouraging results over the entire country and a more widespread use of this method.

In August, 1932 before the Larue County Medical Society we reported five cases out of a group of thirty that we had treated to that date. However since then that group has been increased to fifty with about the same results.

The method of treating these cases has been quite variable, some using Insulin while the patient is about their daily routine and others

*Read before the Jefferson County Medical Society.

have gone to the opposite extreme with a tendency to make the treatment a burden and rather a trying ordeal as has been done by so many with the meticulous handling of the diabetic. We have felt that a routine that can be handled principally by the family with least inconvenience, would be the one that would be the most satisfactory and in this way obviating expense and daily visits by the physician.

Our routine has been about as follows with occasional variation to suit the individual case.

Rest in bed for ten days or two weeks because so much quicker results can be obtained in this way rather than a prolonged ambulatory treatment. As most of these individuals are the ptotic types we have felt that elevation of the foot of the bed is a distinct advantage and about 4" is the most desirable as well as least disagreeable elevation to the patient.

With the individual in bed and prepared for the course it is necessary to decide as to the best way to feed the individual. In the great majority of cases it is best to follow the three meal principle, but occasionally because of existing symptoms such as vomiting, when too much is eaten, or where marked anorexia exists we have found it necessary to give small quantities at more frequent intervals for a few days. In this group it is best to give only a small dose of Insulin (say 5 units) at the end of the day just prior to the last feeding. In the course of a few days there is developed an appetite and we can then give three full meals daily and use the Insulin prior to the last meal. If not at this time in another day or two these meals can be supplemented with a glass of half milk and half cream to which may be added one or two raw eggs as we desire. Or if the individual prefers we can use butter milk to which is added sweet cream. At first there may be a sense of fullness but this soon vanishes and the patient not only tolerates but desires the large quantities of food. During the time this large quantity of food is being taken the Insulin has been increased to 10 units as the single daily dose. This suffices to care for the average case but occasionally we find an individual who is rather slow in responding and to these individuals a higher carbohydrate diet is given and the Insulin increased to 15 or even 20 units at a dose.

In no case have we gone above the 15 unit dose and we have never given the Insulin but once daily, although some have advocated as much as 15 to 20 units given three times daily.

This outlines the Insulin management but we feel that in the majority of cases even better results are obtained by some additional therapy varied for the individual but somewhat along the following lines.

The use of a bitter tonic in those cases that have little or no appetite as it is essential to have a high caloric intake in order to utilize the food. We have used the following prescription with best results.

Tr. Nuc Vom
Tr. Gentian Comp. aa
M. Sig: M. XV t. i. d. A. C.

Then on the completion of the meal we frequently use some of the Malt preparations, such as Irradol with Malt or Myledol or Irradol "A." If the individual does not care for these preparations or even for the sake of variety some of the cod liver oil concentrates are desirable, especially Haliver Oil with Viostuol, has proven quite desirable in this group of cases.

Besides a gain in weight these patients develop a sense of well being and soon pass from the category of undesirable or discouraging patients to a group of enthusiastic, hopeful and useful individuals who enjoy life.

This treatment has long passed from the experimental stage and today is a most useful measure to all who have tried it.

Case I. Mrs. F. C., age 35, seen 8-31-32, weight 94 3/4 pounds. Physical examination essentially negative, had been seen and treated by numerous physicians. At one time received chiropractic treatment. Given 10 days rest in bed with the treatment as outlined above and showed a gain of 7 pounds during this time. During the next two months continued to gain to 106 pounds, symptoms entirely relieved.

Case II. Prof. T. F. H., professor in University, age 26. Nervous, never robust, physical examination revealed hypotension, general malaise, weight 129 pounds, patient rather dubious about treatment and cooperated rather poorly but after 10 days, weight was 137 pounds, nervous symptoms considerably improved.

Case III. Mrs. G. K., age 33, housewife. Loss of weight, lencorrhea, backache. Physical examination revealed slight retroversion of uterus, which was easily corrected by pessary. This however caused no improvement in general health. On June 10, 1932, weight 104 pounds and patient began treatment. On June 20, weight had increased to 116½ pounds and she was feeling fine. This weight has continued to increase and when last seen, March 29, 1933, she was weighing 123 pounds, with no symptoms.

Case IV. Mr. F. P., age 40, seen January 21, 1933 because of backache, epigastric discomfort after meals. There was a history of onset 15 years previously. Gastro-intes-

tinal study revealed an active duodenal ulcer without obstruction. Ulcer management gave rather prompt relief from symptoms, but patient showed very slight gain in weight. After one month weighing 140 pounds, a gain of 4½ pounds. At this time there were no ulcer symptoms and we decided to use our Insulin routine and he was in bed for two weeks on full diet. At the end of that time he had gained to 154 pounds or 14 pounds in two weeks. Since returning to his routine duties and following a normal diet, he has continued to gain to 158 pounds, feels well and has discontinued medication.

## WHY LIKE BEGETS LIKE*

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Covington.

A discussion of such a subject after it has been written upon for many years may be out of place; but when a difference of opinion may arise, it is sometimes a good thing to see the merits or demerits of a different thought than has usually been the rule.

In what is to be written H. L. Wieman's An Introduction to Vertebrate Embryology will be used as vehicle of the thought to be brought out.

One of the most interesting facts brought out in the study of embryology is the development of structures which hark back to more primitive forms of life. To note these changes to meet the future existence of the particular form of life only confirms the gradual evolution of one species from a pre-existing form, taking countless ages perhaps in the transformation, that was necessary to enable a previous ancestor to have a descendant that could live on land or in the air, whereas the original form of life could only exist in the water.

What brought about these changes depends upon the moulding influences that were at work, so as to modify the general rule that like begets like. These forces were at work during the reproduction and the development of the product that ensued in the re-production. This transition is sometimes very apparent, in other cases, the missing link must be supplied.

When one considers the countless present day varieties in the insect world, one marvels at the perfect working mechanism that is present in each insect. Likewise the same amazement greets the keen observer of what has taken place in the animal world that has produced what we proudly boast as the perfect manhood, derived out of the lowly fish or aquatic animal at least.

When we find that animals reproduce themselves faithfully, so that the progeny inherits the characteristics of its class, and that birds of a feather flock together, that each class of animals seems to have a like distrust or hatred against other animals of a dis-similar type—an innate trait, the problem becomes more interesting for there must be a reason why such characteristics do happen.

Wieman states that reproductions of life result from the division of a pre-existing portion of living matter, and this of course, provides the physical basis of heredity. Offspring resemble their parents because both are made of the same kinds of protoplasm.

This reproduction is of two types—agamic and gamic. The agamic being the so-called asexual reproduction, and the gamic the sexual type. In the first type, the vitalizing element is apparently not discernible to the naked eye nor through the microscope, whereas in the other type, the spermatozoon fertilizes the female element, as in amphigony or other cases embraced under the term parthenogenesis, where these changes are initiated in the egg without the intervention of the sperm, where there is another vis-a-tergo—to set life in motion. We know that life and nature are but the sequalae of electrical impulses. In either cases the cell begins a development bringing to fruition a separate living structure, like unto the parent.

In this development there is the cell cleavage. The spermatozoon meets the ovum—and there is a fusion. Weiman states that the head of the sperm is converted into the nucleus, the other of the bi-partite nucleus being supplied by the nucleus of the ovum. Please note this as this point will be discussed later on as a reason why this paper is written.

Here we have a bi-parental nucleus, that is alleged to go through certain blastomeric changes, and that each succeeding nucleus has the same bi-parental characteristics—a la tape worm, so to speak. The result of all this cell division is to make Nature perform a prodigious feat of making like produce like, instead of an easier way and a surer method. This paper will not discuss the recognized cellular changes or cell multiplication. It will attempt to give a plausible modus operandi of why like begets like.

The idea of pre-formation, which held that the egg or even the spermatozoon contained an embryo or an adult preformed in miniature, prevailed to the middle of the eighteenth century.

In 1838 Schleiden and in 1839 Schwann initiated the beginning of a new period concerning Biological theory and investigation—stating that the bodies of animals and plants are composed of cells and the products of cells. It brought out the important fact that

*Read before the Campbell-Kenton-Medical Society.

the organic body is composed of cell units. This theory followed the overthrow of the emboitement theory—that each succeeding generation was to be found within the undeveloped parent of the preceding generation—an egg, within an egg, ad libitum. The theory that will be further on stated is not an "emboitement" idea.

The cell theory made Nature perform a chance experiment when it came to making a parent look like its off-spring or vice-versa. It however has its place in the theory to be discussed.

Whitman stated a truism—"organization precedes cell formation and regulates it."

Conklin in 1905 centrifuged the eggs and brought an abnormal development about. He was pretty near the solution.

Stentor made interesting experiments that showed that certain parts had a tendency to grow. Here he was close to the outward thrust that develops in every fertilized ovum or in those to which the vis-a terga has been applied as in the parthenogenetic cells.

Experiments on the protoplasm have always been interesting. They have brought into our knowledge the component parts of protoplasm, their structural parts and their utility. Like as two peas in a pod. Why do twins so often look alike? An off-spring developed by cellular division, two in to four, and each again divided by or into two, etc.

Nature in her development of like from like has a wonderful shop or laboratory, where she molds the plates derived from the ancestral head into an image of the parent. She does nothing haphazard if left alone. However she can be influenced by interference as in experimental fertilization.

What part electrical impulses may play in this scheme will be left to the experimenter.

The theory of this Like Begets Like is based on the hypothesis that the original source of the succeeding generations is handed down to these succeeding generations by a process of cell division analagous to the slicing of food seen in any grocery shop. This slicing by Nature is a cell division of a previous existing cell. It might be likened to a stick of candy in which through its center runs a design, this design may be the outline of a star, animal, flag, etc. In the living germ cell, it has all the essentials of the future living distinct entity. To it is applied the same principle that occurs in ordinary cell division; but the time of the division is different. The ovum contains one cell that had its escape from the ovary, where it had lain dormant since the early formation of the female sex organ in the earliest days of pregnancy. In the Spermatazoon its origin is more recent, being derived from the testicular structures, which have retained this slicing function, which remained dormant until puberty.

The female element and the male element perhaps by electrical impulses stimulate the development of the germ cell, whichever has the mastery in the beginning—determines the sex of the off-spring. The fertilized cell, then splits again, this split produces a cell that forms the future entity, the other serves to form the Wolffian bodies or the Mullerian structures, around which the future embryo is formed. In plants an analogous process, I believe occurs. In plants however, the future site of branches has lodged at that place a segment of the original germ spot, that remains dormant until that particular spot is called upon to develop a branch, then it becomes active, and germ cells are pushed forward to the bud, where they multiply so as to furnish the future seed of the plant—segment derived from segment—all alike—thus producing like in turn. The seed is nothing more than an embryo plant encased in the outer leaflets, which in turn are encased in the shell—a miniature womb and membranes, so to speak. All Nature is alike in many respects.

From the above cleavage it will be seen why—being derived from an identical source by a system of cleavage that like will beget like—they have all been derived from the original germ cell handed down through countless generations, the old dying, but its place being filled by its own image.

Now this fertilized germ cell proceeds to grow, cells dividing by two, gradually increasing the bulk of the different structures within the individual plant or animal cell. Gradually the growth unfolds the nature of the off-spring—just as blowing into a collapsed rubber toy will eventually show the toy inflated to the fullest extent. What the breath has done to the toy—"the outward thrust" applied to the germ cell has gradually caused it to expand to the recognizable off-spring. Let this "outward thrust" be interfered with in any way, and perhaps only stubs will be there where fingers should be, perhaps a hare-lip, the persistency of other lack of proper development.

Our text books show how the future body begins to develop about the primitive groove, and from thence the process extends until the developing wall structures meet in the mid-anterior line and fuse. Nature has merely stimulated the "outward thrust" with the suitable vis-a-tergo—inflating as it were the previously existing rudimentary offspring. The germ platelet, so to speak has a limiting membrane, which as has just been suggested is stretched and developed to the future recognizable embryo. In this limiting

membrane are to be found the undeveloped parts that are stimulated to growth so that they become the cells from which the future development proceeds. Within the protoplasm of the segment are to be found, so I believe, the ground work of the Master Artist, upon which the picture, we call the off-spring has been sketched and which awaits being brought out in detail by the magic of cell division. This theory differs from "emboitement" in that the succeeding generations are not within the parent, as an egg within an egg, but are continuous with the parents, as are the parents continuous with their ancestors.

I have a friend who has a characteristic defect, a family mark—a ptosis of the upper eye-lids. He has transmitted this to all of his children, who are the "very spit of the parent," except to the oldest child, who is a duplicate of the mother. This slicing off of the original pattern will explain this blemish. My father had a mole on his back. I have a mole at the identical spot on my back, and my granddaughter has the same blemish. I am "moley"—being marked with numerous moles, as was my father and my children. Neither my mother nor my wife have such marks. We "moley" ones certainly got a slice off of the "old block" in our make up.

I trust that what I have written may be of use in our study of Embryology.

## DIAPHRAGMATIC PARALYSIS AS AN AID IN GASTRIC SURGERY*

L. Wallace Frank, M. D.

Louisville.

I report this case, not because the condition itself is unusual, but because of the technique employed in dealing with it. In the first place, it was a diagnostic error on the part of the family physician.

The patient was referred to us from a neighboring state with a diagnosis of carcinoma of the stomach. The man had been x-rayed and the plate showed a rather typical picture of a carcinoma in the greater curvature of the stomach, apparently high up. Dr. Bell, the radiologist, at Norton Infirmary re-rayed the patient in my presence and the same sort of picture was obtained. Fluoroscopic study was made to determine whether or not the stomach above the lesion was infiltrated, and there was no evidence of infiltration. Exploration was advised, with the idea of doing a resection of the stomach if possible. Realizing that the lesion was very high up, we decided that the operation would be mechanically facilitated by interruption of the diaphragmatic movement. The patient was operated upon on October 18th, and a greatly thickened mass was found on the lesser curvature of the stomach with glands extending well up into the gastro-hepatic omentum. Before opening the abdomen, however, we crushed the phrenic nerve for the purpose of inducing diaphragmatic paralysis. I am now of opinion that this was a much more radical procedure than was necessary; that the injection of novocaine or normal saline will interrupt the diaphragmatic movement sufficiently to permit ease of operation and has the further advantage that the diaphragmatic action will return within a much shorter period of time. Also the cough reflex and the ability of the individual to cough returns much more quickly, thus promoting the expectoration of mucus formed as a result of inhalation anesthesia, which in this case was ether.

The operation was carried out without any difficulty whatever. There was no pull of the diaphragm on that side and we could have resected considerable more of the stomach than we did. As it was, we left approximately one inch of the lesser curvature.

So far as I am aware, the induction of diaphragmatic paralysis is a new step in gastric surgery. The paralysis, which was accomplished in this case by crushing the phrenic nerve, will probably last from six to eight months, but when induced by the injection of novocaine or normal saline, would last only two to eight days. There is no doubt that it greatly facilitates the operation.

*Read before the Louisville Medico-Chirurgical Society.

**Treatment of Agranulocytosis.** — Reznikoff presents the results of adenine sulphate therapy in fifteen uncomplicated cases of agranulocytosis in which recovery followed in eleven of the patients. In severely complicated cases of agranulocytosis or in aleukemic leukemia and aplastic anema, adenine sulphate has not been effective in the doses used in this study. He observed that 1 Gm. of adenine sulphate boiled in from 35 to 40 cc. of saline solution, given warm, intravenously three times daily for at least three days for an adult, is nontoxic, and he suggests that amount as the dose in treating agranulocytosis in adults. This is probably not a maximum dose, but in most patients who responded favorably it was found that with such quantities, distinct improvement occurred in the symptoms, in decline of the fever and in an increase of granulocytes within forty-eight hours, frequently within twenty-four hours. As much as 10.4 Gm. has been given to a patient within seven days with no ill effects.

## THE LIFE OF DR. LEWIS FRANCIS HAMMONDS

By J. G. Carpenter
Stanford.

Dr. Hammonds was the son of Dr. John O. and Ellen Hammonds, born in Pulaski County, July 13, 1868 and when a young man moved to Danville, Ky. and this, his permanent home and was educated in the best schools of Pulaski and Casey Counties. From childhood has been an Exemplar in Noble Christian acts. In his early manhood, was a school teacher at Thomas Ridge and Danville and was merchant in Danville. January 1st, 1893, married Miss Renna Sweeney; to them 12 children were born; two of whom preceded him into the "Bright Beyond". He left a devoted mother, wife and ten children; sons-in-law and daughters-in-law, to grieve his departure from earth to the House of many Mansions.

He was a graduate of the Louisville Medical College, 1895, and an Alumnus of the University of Louisville Medical Department and being studious, attentive to business, with an executive ability and highly ethical conduct, a large and remunerative practice soon came to him. He was a member of the Casey County Board of Health; and one of the organizers and charter members of the Casey County Medical Society; the Russell Springs District Medical Society; a member of the Lincoln County Medical Society, and the Kentucky State Medical Association and a member of the Casey County U. S. Pension Board of Examiners, and was a member of the Danville School and an Elder in the Christian Church at the time of his death.

Dr. Hammonds and wife entertained with a bountiful hospitality, and he made a profession of religion about 35 years ago and was true and faithful to his Church and Sunday School, in the capacity of teacher, superintendent and elder. He was a great physician and an ideal son, husband, father, grandfather and father-in-law, friend and neighbor and gave his daily life for the betterment of his community and county, and like the illustrious Abraham Lincoln, he lived a life of "malice toward none—charity for all;" and was as good and kind to the poor as he was to the rich and was so kind and devoted to his elderly mother and has cared for her many years, and he had a pure and undefiled religion; visiting the widows and orphans in their afflictions, and kept himself unspotted, from the world. Well done thou good and faithful servant, rest in joy, peace and happiness with the Great Physician in the Heavenly Home.

Dr. Hammonds had an apoplectic stroke Sunday P. M. after eating dinner and became paralyzed and died the following Wednesday.

## BOOK REVIEWS

CORRECTIVE PHYSICAL EDUCATION.—By Josephine L. Rathbone, M. A. Instructor in Physical Education, Teachers College, Columbia University.

This authoritative textbook presents the new Reconstructive Physical Education—tells students how to apply the modern exercises designed to correct faulty development or to compensate the young person so afflicted.

Published April, 1934. 292 pages, 153 illustrations. Cloth, $2.50 net. W. B. Saunders Company, West Washington Square, Philadelphia, London; 8, Grape Street.

The first two chapters give a practical review of the basic fact of Anatomy and physiology that are of value in corrective work.

The various types of underdevelopment and faulty development receive individual attention. To each physical handicap Miss Rathbone applies the latest measures designed to correct, to strengthen, or to retain. The steps of each exercise are given in move-to-move descriptions. The movements in all these exercises are made unmistakably clear by hundreds of little drawings of the "stick-man" type. Mental and emotional maladjustments receive special consideration, showing how to apply in practice the many physical therapeutic aids designed to restore mental health.

FOOD BORNE INFECTIONS AND INTOXICATIONS. Fred Wilbur Tanner. 440 pages. Twin City Printing Co., Champaign, Illinois, 1933.

As a general readable text on Food Poisonings, this volume is to be recommended. Chapters are included on food hygiene, metals in food, plant and animal products, food allergy. Special chapters on various bacterial groups responsible for food poisonings are of importance.

The surer knowledge of the causes of food poisonings will eliminate the diagnosis of "ptomaines" as causes of illness.

SPINAL ANESTHESIA, TECHNIC AND CLINICAL APPLICATION. By George R. Velrs, M. D., Salena, Oregon. Illustrated. Price $5.50. C. V. Mosby Company, Publishers, St. Louis.

This book constitutes a survey of the experimental and clinical records in the field of spinal anesthesia for the past 49 years. The wide adoption of spinal analgesia by larger and more important hospitals and clinics, has created a demand for a volume correlating well-known and proved facts on this subject.

# Kentucky Medical Journal

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NEXT MEETING HARLAN, OCTOBER 1-4, 1934


## COUNTY SOCIETY REPORTS

**Mason:** The regular meeting of Mason County Medical Society was held July 26, 1934, being postponed from regular date of July 11, 1934. The president, W. E. Hord, called the meeting to order at 9:00 P. M. and at once turned it over to our guest, Dr. Granville S. Hanes, of Louisville, who gave a most detailed lecture on, "Rectal Conditions," fully illustrated with lantern slides.

The lecture was so interesting and so instructive and so much different from anything the society had ever had, that the hour was quite late, when the meeting adjourned.

The following members were present: W. E. Hord, A. R. Quigley, A. R. Carrigan, A. O. Taylor, H. M. Parker, C. V. Stark, W. G. Phillips, L. H. Long, A. F. Murphy.

ALLEN F. MURPHY, Secretary.

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**Pulaski:** On June 28th, 1934, the Pulaski County Medical Society gave a dinner to the physicians of Wayne, McCreary, and Pulaski Counties, their wives, and the registered nurses of these counties.

Following the dinner, a program was presented by the Cancer Committee of the Kentucky State Medical Association. This consisted of a paper by Dr. Louis Frank, of Louisville, on "Cancer of the Uterus," and a discussion of the pathology involved, by Dr. A. J. Miller, Professor of Pathology at the University of Louisville School of Medicine. The talks were illustrated by lantern slides and motion pictures of cancer cells in vitro.

Dr. Frank distributed reprints of his publication "A Plain Talk on Cancer" to the women present.

M. C. SPRADLIN, Secretary.

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**Seventh Councilor District:** The Seventh Councilor District held its annual meeting at Crab Orchard, Thursday, July 26, 1934. Although it was the day of the burial of the beloved J. B. Kinnaird of Lancaster, it was the expressed wish of the family that the meeting should be held.

The members present were: F. M. Stites, L. H. South, J. A. Bowen, F. G. Speidel, F. P. Strickler, A. T. McCormack, W. O. Johnson, Winston Rutledge, Wallace Frank, W. J. Martin, E. D. Enfield, Louisville; M. M. Phillip, Crab Orchaard; N. M. Garrett, Brodhead; W. G. Pennington, London; E. J. Brown, Liberty; W. F. Lamb, Stanford, P. C. Sanders, Danville; Carl Norfleet, Somerset; W. E. McWilliams, Brodhead; W. M. Elliott, Lancaster; A. E. Grimes, Lexington, R. E. Bartlett, Berea; J. H. Hopper, Perryville; J. C. Baker, Mt. Vernon; W. D. Laswell, Canes Mountain; H. G. Sanders, Burgin; D. B. Southard, Stanford; William Sweeney, Liberty; J. W. Scudder, Liberty; J. M. Acton, Danville; J. Y.

Harper, Jenkins; F. W. Rankin, Lexington; G. M. McClure, Danville; Mrs. Strickler, Norfleet, Mesdames Sanders, Action, McClure, and Laswell, were lady guests.

In absence of Dr. Virgil Kinnaird, Dr. L. H. South presided.

The following program was carried out:

**Morning Session**

Scientific Contraception Technique, W. O. Johnson, M. D., Louisville.

Two Interesting Diabetes Cases, Frank Stites, M. D., Louisville.

**Afternoon Session**

Fractures Treated by the Kirschner Pin and Boehler's Method, Frank P. Strickler, M. D., Louisville.

Some Lesions of the Large Bowel and Rectum, F. W. Rankin, M. D., Lexington.

Fungus Infections of the Skin, Winston Rutledge, M. D., Louisville.

The Chair appointed a committee to draft resolutions on the death of Dr. J. B. Kinnaird, Lancaster.

Dr. A. T. McCormack gave a lovely tribute to Dr. Kinnaird, detailing his life and medical activities. At the closing of these remarks, the meeting stood in silent prayer.

The following resolutions were drafted and passed:

We, the Committee appointed to draft resolutions upon the death of Dr. J. B. Kinnaird, of Lancaster, Kentucky, a past councilor of the district and a past vice-president of the Kentucky State Medical Association, do resolve:

1. "That the State, County and District Medical Societies have lost an able leader of the profession; the community in which he lived, an honorable and upright Christian gentleman.

2. Be it further resolved that the members of the District Medical Association share with both family and community in their loss, especially do we extend heartfelt sympathies to his son, Dr. Virgil Kinnaird and family.

3. Be it further resolved that a copy of these resolutions be published in the Kentucky State Medical Journal, a copy to the local press and a third copy be forwarded to members of the bereaved family."

Signed:
J. W. SCUDDER,
M. M. PHILLIPS,
W. F. LAMB,
Committee.

There being no further business, the meeting adjourned.

M. M. PHILIPS, Secretary.

## FORUM

July 31, 1934.

To the Editor:

I wish to call your attention to a matter that might be of interest to the doctors of Kentucky.

July 29, 1934, a man called me to the office, giving the name of John A. Rice, and saying he lived between Paint Lick and Lancaster. He gave symptoms indicating a typical case of renal stone. He said he had had three attacks before and that he had seen Dr. Ray of Lexington and he discussed method of collecting urine used by Dr. Ray and said Ray found renal sand. He also said Ray gave him some little white tablets, very bitter, which relieved him. This man seemed in such pain that I gave him an opiate. On July 30, he came again to my office while I was out. I became suspicious and on inquiry found no one of that name, lived where he said he lived. I talked with Dr. G. C. Goodman also of Paint Lick, and learned that a man of this description had visited him a few days before and had given exactly the same history and symptoms and used the name Gooch (Sam J. I think). He gave Goodman a check on a Lancaster Bank, signed Gooch, He gave me a check on a Lancaster Bank signed John A. Rice. The bank returned Goodman's check marked "no account," and over the phone said Rice had no account there. Others who saw him leave my office say he was driving a car with Lincoln County license. I am sure this man is a pretty clever addict. He did not ask for opium but gave a list of other drugs that had failed to relieve him. He is of average height, rather thin, has slightly gray hair, about 45 to 50 years old. Talks like an intelligent man. I believe physicians of the State should be warned about this man, as no doubt, we are not the only ones visited or who will be visited by him.

Respectfully,
F. H. SMITH, M. D.,
Paint Lick, Ky.

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**The General Practitioner and Therapeutics.**—Medical students ought to be taught therapeutics just as thoroughly as they are now taught diagnosis or pathology. In connection with this one might have reason to hope that the general practitioner, who has ample opportunities for observing the therapeutic effects of drugs, might play a more important part in the advance of therapeutics than he has done for the last hundred years. Many observant general practitioners find out, as the result of their experiences, points about the effects of drugs or their side actions which may seem too insignificant to warrant publication. Though these points taken singly may seem of little importance, taken in the aggregate the experiences of the general practitioner, if they could be collected and assessed, would certainly assist greatly in the advance of practical therapeutics.

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Allen O. Whipple, New York, N.Y.
Hugh H. Young, Baltimore, Md

FOREIGN ACCEPTANCES TO DATE:

Dr. Roberto Alessandri, Prof. of Clinical Surgery, Medical Dept., Royal University of Rome, Rome Italy.

Dr. A. Mario Dogliotti, Prof. of Clinical Pathology, Royal University of Turin, Turin, Italy.

Sir Harold Gillies, London, England.

Dr. Hans Guggisberg, Prof. of Gynecology, University of Berne, Berne, Switzerland.

Dr. Paul Strassmann Prof. of Obstetrics and Gynecology, University of Berlin, Berlin, Germany.

TENTATIVE:

Mr. A. Lawrence Abel, F. R. C. S., Surgeon Cancer Hospital, London, Eng.

Prof. Mario Donati, Head of Dept. of Surgery, University of Milan, Milan, Italy.

Dr. Ferdinand Sauerbruch, Prof. and Head of the Dept. of Surgery, University of Berlin, Berlin, Germany.

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"Cane sugar: Probably about the same as lactose (Reuss)."—*J. L. Morse, and F. B. Talbot: Physiology and pathology of the digestion of the carbohydrates in infancy, Boston M. & S. J., 164:852-855, June 15, 1911.*

## 1912

"Maltose has for many years been considered one of the most valuable of infant foods in modifying milk formulas; but the German school in the last few years has called special attention to the value of this sugar as a substitute for milk and cane sugars in conditions of intestinal fermentation. It is more easily assimilated and more rapidly absorbed than lactose or saccharose and it may be taken therefore by the infant in larger quantities without producing sugar fermentation."

"Maltose is especially indicated in the feeding of very young and delicate infants, and in all cases where either milk or cane sugar has produced intestinal fermentation and sugar intoxication. In the feeding of maltose it has been found advisable to combine it with about equal parts of dextrin. In Germany, and later in this country, 'Soxhlet's Nahrzucker' (which contains maltose 52.44 per cent., dextrin 41.26 per cent., and sodium chlorid 2 per cent.) has been largely used. Mead's Dextri-Maltose (malt sugar), which contains about equal parts of dextrin and maltose, is a similar preparation which may be used instead of milk sugar or cane sugar for modifying milk mixtures."—*B. K. Rachford: Diseases of Children, D. Appleton & Co., New York, 1912, p. 125.*

## 1913

"It is well to start with one ounce (albumin milk, or albumin-buttermilk) to every pound of body-weight in the twenty-four hours, increasing gradually until two or three ounces to the pound of body-weight are being given. Then add sugar, preferably a malt sugar, about one-fourth of an ounce at a time to the twenty-four-hour quantity, until an ounce or an ounce and a half is being given."—*J. Foote: Principles of treatment in malnutrition and atrophy of infants, Interstate M. J., 20:1913, No. 6.*

## 1914

"Milk sugar and cane sugar may be used in infant feeding, but my preference is for malt sugar. Mead and Johnson put up a convenient preparation which they call Dextri-Maltose and which consists of maltose 51 per cent., dextrin 47 per cent., sodium chloride 2 per cent., and which has a food value of about 110 calories per ounce."—*J. A. Gannon: Whole milk dilutions in feeding normal infants, Washington Med. Annals, 13:38-43, Jan., 1914.*

## 1914

"Dextrin-maltose causes the greatest gain in weight, cane sugar less, and lactose produces the least gain."—*M. S. Reuben: Observations on milk station infants, Arch. Pediat., 31:176-196, March, 1914.*

## 1914

"A composite opinion of the sugars is in favor of dextri-maltose, milk sugar and cane sugar in the order named."—*R. A. Strong: Essentials of modern artificial feeding of infants, Lancet-Clinic, March, 14, 1914.*

## 1914

"Experiments show that sugars vary in their rate of absorption, some being assimilated rapidly, while others distribute their nutriment over a longer period. For example, maltose is most promptly assimilated, cane sugar next and milk sugar slowest."

"The condition in which dextri-maltose is particularly indicated is in acute attacks of vomiting, diarrhea and fever. It seems that recovery is more rapid and recurrence less likely to take place if dextri-maltose is substituted for milk sugar or cane sugar when these have been used, and the subsequent gain in weight is more rapid.

"In brief, I think it safe to say that pediatricians are relying less implicitly on milk sugar, but are inclined to split the sugar element, giving cane sugar a place of value, and dextri-maltose a decidedly prominent place, particularly in acute and difficult cases."—*W. D. Hoskins: Present tendencies in infant feeding, Indianapolis M. J., July, 1914.*

## 1915

"In the severe cases (of diarrhea) he (Benson) uses Finkelstein's casein milk with malt sugar. He also believes that dextri-maltose is to be preferred to milk sugar or any other sugar, as the infants gain more rapidly and digest more easily this form of sugar."—*R. A. Benson: Observations on 1,500 artificially-fed infants, Med. Century, Feb., 1915, p. 33; abst. Arch. Pediat., 32-556-557, July, 1915.*

## 1915

"Until very recently we have taken it for granted that milk sugar was the best, but now many consider that malt sugar is even better. However, the malt sugar is not used in its pure state, but in the form of extracts, as dextri-maltose."—*E. B. Lowry: Your Baby, Forbes & Co., Chicago, 1915, p. 162.*

## 1915

"Cane-sugar (saccharose), like most of the other disaccharids, is not absorbed as such, but must first be split by the invertase of the intestinal secretion into the two glucoses, dextrose and levulose, which are readily absorbable. Maltose (malt-sugar) occupies an exceptional position among the disaccharids, in being partly absorbable as such. This is probably due to the fact that it can be split not only by the maltase of the digestive juices, but also by the same ferment being present and active in the circulating blood (Chittenden and Mendel)."

"Anticipating a little, we may mention that all cases, in which lactose may advantageously be replaced by other carbohydrates, are pathological, and without exception the result of unsuccessful attempts at artificial feeding; they will therefore be discussed under that head.

"Dextrin, intermediate between sugar and starch, is physiologically nearer to the former; we shall have occasion to see that, under certain conditions, it may supplement sugar very advantageously. Given together with maltose, it materially delays the fermentation of the latter; Stolte observes that the more complex the carbohydrate the longer fermentation is postponed."

"All malted foods contain dextrin, and there is reason to believe that their value largely depends on their being somewhat complicated; such, at least, is the opinion of Usuki and Stolte, who believe that a mixture of carbohydrates is more slowly absorbed than a pure sugar, and therefore tends to check fermentation in the intestine. Southworth explains the matter more definitely, by attributing the antifermentative action entirely to the dextrin, which is not fermentable as such, but only after it has been split into maltose, a process that takes place only gradually, and in the later stages of digestion.'

"I make it a rule to give the ordinary formula with dextrin-maltos whenever the usual milk or cane-sugar mixtures seem to cause c cessive fermentation and colic, or are attended with the evacuat of soap stools. I decidedly prefer this, as a preliminary measure, going over at once to some very low fat combination, which can only be a temporary makeshift at best. I also find dextrin-maltose an excellent addition to albumin-milk when the first object of that food has been achieved and a gain in weight is desired; in this way I have succeeded in feeding albumin-milk far beyond the period usually advised, with highly gratifying results."—*F. L. Wachenheim: Infant-Feeding; Its Principles and Practice, Lea & Febiger, Phila., 1915, pp. 31, 33, 146, 158.*

## 1915

"The infant with diarrhea and vomiting is given nothing but tea for from twelve to twenty-four hours, no longer, and then the albumin milk is commenced, not over 5 gm. ten times a day, with 3 per cent. of a maltose-dextrin mixture. The amount of albumin milk is increased by 50 gm. each day until the daily ration totals 300 gm. After the weight has become stationary, carbohydrates can be added up to 5 per cent. of the maltose-dextrin mixture."

"Albumin milk is not so uniformly effectual in dysenteriform diarrhea as in cholera infantum. Whey seems to act better, diluted half and half with oatmeal gruel. After the starvation period he gives 50 gm. of the whey and increases by 50 gm. daily with equal amounts of oatmeal gruel. As improvement sets in 3 per cent. of a dextrin-maltose preparation can be added."—*L. Langstein: Cholera infantum and other severe diarrheas in infants, Therap. Monatsh., V. 29, August, 1915; Abst. J.A.M.A., 65:1314, Oct., 7, 1915.*

## 1916

"Dextri-maltose, having a higher absorption tolerance than the other sugars, is less likely to cause intestinal disturbances when large amounts of it are given."—*H. R. Mixsell: A brief résumé of the role of carbohydrates in infant feeding, Arch. Pediat., 33:31-36, Jan., 1916.*

## 1916

In cases of malnutrition, and indigestion in infancy, "The appetite improves rapidly, and the stools soon become normal in appearance, if the sugars are intelligently prescribed. By this I refer to proper proportions of dextrin and maltose. When there is a tendency to looseness, I have used the preparation known as 'dextri-maltose,' for the extra carbohydrates; . . ."—*M. Ladd: Further experience with homogenized olive oil mixtures, Arch. Pediat., 33:501-512, July, 1916.*


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**Louisville, Kentucky**

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Senility

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and
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Waukesha, Wis.


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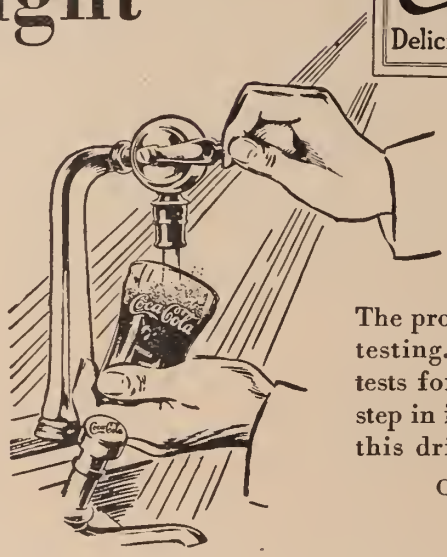
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A. GUIGLIA, M. D., Resident Physician

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Visiting Consultant

D. A. JOHNSTON M. D.
Resident Medical Director

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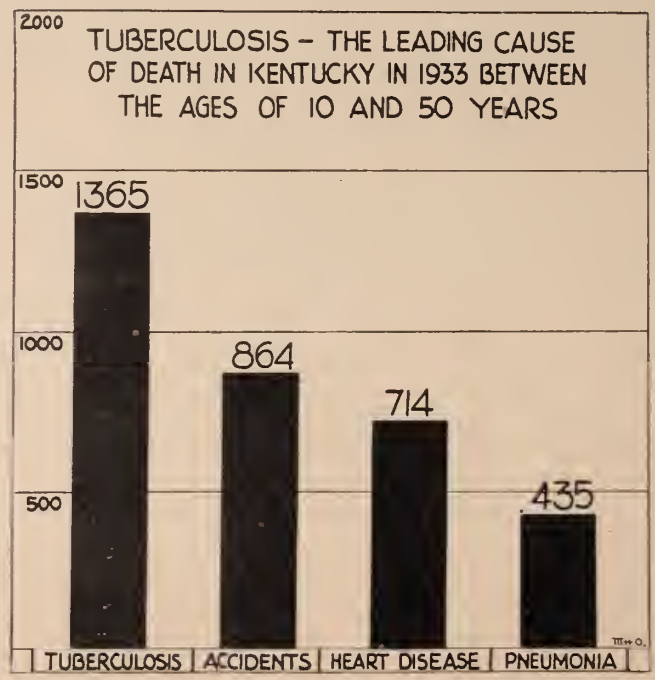
## CALENDAR OF COUNTY SOCIETY MEETINGS

| COUNTY | SECRETARY | RESIDENCE | DATE 1934 |
|---|---|---|---|
| Adair | N. A. Mercer | Columbia | October 3 |
| Allen | A. O. Miller | Petroleum | October 24 |
| Anderson | J. B. Lyon | Lawrenceburg | October 1 |
| Ballard | F. H. Russell | Wickliffe | October — |
| Barren | Paul S. York | Glasgow | October 17 |
| Bath | H. S. Gilmore | Owingsville | October 8 |
| Bell | J. G. Foley | Pineville | October 12 |
| Boone | R. E. Ryle | Walton | October 17 |
| Bourbon | W. B. Hopkins | Paris | October 18 |
| Boyd | R. G. Culley | Ashland | October 2 |
| Boyle | P. C. Sanders | Danville | October 9 |
| Bracken | J. M. Stevens | Brooksville | October 1 |
| Breathitt | O. M. Goodloe | Jackson | October 16 |
| Breckinridge | J. E. Kincheloe | Hardinsburg | October — |
| Bullitt | S. H. Ridgeway | Shepherdsville | October — |
| Butler | G. E. Embry | Morgantown | October 3 |
| Caldwell | W. L. Cash | Princeton | October 2 |
| Calloway | A. F. Russell | Murray | October 4 |
| Campbell-Kenton | Luther Bach | Bellevue | Otcober 4-18 |
| Carlisle | G. W. Payne | Bardwell | October 2 |
| Carroll | J. M. Ryan | Carrollton | October 9 |
| Carter | W. S. Hawn | Grayson | October 9 |
| Casey | Wm. J. Sweeney | Liberty | October 25 |
| Christian | M. A. Gilmore | Hopkinsville | October 16 |
| Clark | R. H. Scobee | Winchester | October 19 |
| Clay | J. L. Anderson | Manchester | October 9 |
| Clinton | S. F. Stephenson | Albany | October 20 |
| Crittendon | C. G. Moreland | Marion | October 8 |
| Cumberland | W. F. Owsley | Burkesville | October 3 |
| Daviess | I. A. Thorpe | Owensboro | October 9-23 |
| Elliott | | | October — |
| Estill | Walter Cox | Irvine | October 10 |
| Fayette | John Harvey | Lexington | October 9 |
| Fleming | J. B. O'Bannon | Flemingsburg | October 10 |
| Floyd | E. E. Martin | Allen | October 12 |
| Franklin | W. S. Snyder, Jr. | Frankfort | October 4 |
| Fulton | Glynn F. Bushart | Fulton | October 10 |
| Gallatin | J. M. Stallard | Sparta | October 18 |
| Garrard | B. Earl Caywood | Lancaster | October 18 |
| Grant | C. A. Eckler | Dry Ridge | October 17 |
| Graves | H. H. Hunt | Mayfield | October 2 |
| Grayson | C. F. Blankenship | Leitchfield | October 25 |
| Green | S. J. Simmons | Greensburg | October 1 |
| Greenup | Carl M. Gambill | Greenup | October 12 |
| Hancock | F. M. Griffin | Hawesville | October 1 |
| Hardin | D. E. McClure | Elizabethtown | October 11 |
| Harlan | Clark Bailey | Harlan | October 27 |
| Harrison | W. B. Moore | Cynthiana | October 1 |
| Hart | S. F. Richardson | Munfordville | October 2 |
| Henderson | Walter O'Nan | Henderson | October 8-22 |
| Henry | Owen Carroll | New Castle | October 29 |
| Hickman | Chas. Hunt | Clinton | October 4 |
| Hopkins | David L. Salman | Madisonville | October 4 |
| Jackson | | | October 6 |
| Jefferson | Chas M. Edelen | Louisville | October 1-15 |
| Jessamine | J. A. VanArsdall | Nicholasville | October 18 |
| Johnson | P. B. Hall | Paintsville | October 13 |
| Knott | M. F. Kelley | Hindman | October 27 |
| Knox | F. R. Burton | Barbourville | October 26 |
| Larue | D. W. Gaddie | Hodgenville | October — |
| Laurel | Oscar D. Brock | London | October 10 |
| Lawrence | W. C. Gose | Louisa | October 15 |
| Lee | W. D. McCullom | Beattyville | October 13 |
| Leslie | John H. Kooser | Hyden | October — |
| Letcher | R. Dow Collins | Whitesburg | October 30 |
| Lewis | J. D. Liles | Vanceburg | October 15 |
| Lincoln | Lewis J. Jones | Houstonville | October 19 |
| Livingston | Wm. C. Davis | Salem | October — |
| Logan | Walter Byrne, Jr. | Russellville | |
| Lyon | H. H. Woodson | Eddyville | October 2 |
| McCracken | Leon Higdon | Paducah | October 10-17 |
| McCreary | R. M. Smith | Stearns | October 1 |
| McLean | G. L. Thompson | Calhoun | October 11 |
| Madison | Hugh Mahaffey | Richmond | October 18 |

| COUNTY | SECRETARY | RESIDENCE | DATE 1934 |
|---|---|---|---|
| Mariou | W. C. Griffey | Lebanon | October 16 |
| Marshall | S. L. Henson | Benton | October 17 |
| Mason | Allen F. Murphy | Maysville | October 10 |
| Meade | A. A. Baxter | Brandenburg | October 25 |
| Menefee | E. T. Riley | Frenchburg | October — |
| Mercer | J. Tom Price | Harrodsburg | October 9 |
| Metcalfe | P. W. Bushoug | Edminton | Octobeer 2 |
| Monroe | Geo. E. Bushong | Tompkinsville | October — |
| Montgomery | D. H. Bush | Mt. Sterling | October 9 |
| Morgan | W. H. Wheeler | Betsy Sayne | October — |
| Muhlenberg | G. L. Simpson | Greenville | October 9 |
| Nelson | R. H. Greenwell | Bardstown | October — |
| Nicholas | T. P. Scott | Carlisle | October 15 |
| Ohio | Oscar Allen | McHenry | October 3 |
| Oldham | S. J. Smock | LaGrange | October 2 |
| Owen | K. S. McBee | Owenton | October 4 |
| Owsley | D. E. Wilder | Booneville | October 1 |
| Pendleton | W. A. McKenney | Falmouth | October 10 |
| Perry | R. L. Collins | Hazard | October 8 |
| Pike | M. D. Flanary | Pikeville | October 1 |
| Powell | I. W. Johnson | Stanton | October 1 |
| Pulaski | M. C. Spradlin | Somerset | October 11 |
| Robertson | | | October 15 |
| Rockcastle | Lee Chestnut | Mount Vernon | October 11 |
| Rowan | G. C. Nickell | Morehead | October 23 |
| Russell | J. B. Scholl | Jabes | October 8 |
| Scott | F. W. Wilt | Georgetown | October 4 |
| Shelby | W. E. Morris | Shelbyville | October 19 |
| Simpson | N. C. Witt | Franklin | October 9 |
| Spencer | | | October — |
| Taylor | W. B. Atkinson | Campbellsville | October 4 |
| Todd | E. E. Boone, Jr. | Elkton | October 3 |
| Trigg | H. L. Wallace | Cadiz | October 31 |
| Trimble | J. J. Gerkins | Bedford | October — |
| Union | D. C. Donan | Morganfield | October 31 |
| Warren | Hal Neal | Bowling Green | October 10 |
| Washington | J. H. Hopper | Willisburg | October 17 |
| Wayne | R. E. Teague | Monticello | October 4 |
| Webster | C. M. Smith | Dixon | October 26 |
| Whitley | C. A. Moss | Williamsburg | October — |
| Wolfe | G. M. Center | Campton | October 1 |
| Woodford | Chas. F. Voigt | Midway | October 4 |


## A CHALLENGE TO THE MEDICAL PROFESSION

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# KENTUCKY MEDICAL JOURNAL

BEING THE JOURNAL OF THE KENTUCKY STATE MEDICAL ASSOCIATION

**Published Under the Auspices of the Council**

VOL. 32 No. 10 BOWLING GREEN, KY. OCTOBER, 1934

## TO THE PHYSICIANS OF THE STATE OF KENTUCKY

The first joint meeting of the Jefferson County Medical Society and the Louisville Retail Druggists Association, will be held in the amphitheatre, at the City Hospital, in Louisville, Monday, October 15th, at 8:00 P. M.

The purpose of this and the subsequent meetings of the gentlemen of the two professions, is to work toward the bringing about of a better understanding, both professional and fraternal.

The speaker for the physicians has not yet been selected, however, we can assure you that he will be a man who stands at the top of the profession. The speaker for the pharmacists will be Professor Edward Spease, Dean of the Department of Pharmacy of Western Reserve University of Cleveland, who was instrumental in developing such a plan in this city.

The joint committee on arrangements cordially invites, in fact, urges, all physicians and pharmacists of the State to attend this first meeting.

## THE INTER-STATE POST GRADUATE MEDICAL ASSOCIATION OF NORTH AMERICA

The first International Assembly of the Inter-State Post Graduate Medical Association of North America to be held east of the Alleghenies, is to take place in the public auditorium, of Philadelphia, Pennsylvania, November 5th, 6th, 7th, 8th, and 9th, 1934, with pre-Assembly clinics on November 3rd and post-Assembly clinics on November 10th in the Philadelphia Hospitals.

The public auditorium is located in the University area and across the street from the Philadelphia General Hospital, thus, assuring the Assembly close access to an abundance of clinical material.

The aim of the program committee with Dr. George W. Crile, as chairman, is to provide for the medical profession of North America an intensive post graduate course covering the various branches of medical science. The program has been carefully arranged to meet the demands of the general practitioner, as well as the specialist. Extreme care has been given in the selection of the contributors and the subjects of their contributions.

The Philadelphia County Medical Society will be host to the Assembly and has arranged an excellent list of committees that will function throughout the Assembly. A most hearty invitation is extended to all members of the profession who are in good standing in their State or Provincial Societies, to be present and enjoy the hospitality of Philadelphia, "the City of Brotherly Love." A list of distinguished teachers and clinicians who are taking part on the program will be found on page XIV of the advertising section of the September JOURNAL.

Special reduced railroad rates will be in effect on all lines.

## A PLAN TO EVALUATE INDEPENDENTLY SEROLOGIC PROCEDURE FOR THE DIAGNOSIS OF SYPHILIS IN THE UNITED STATES

Since the serologic conferences at Copenhagen and Montevideo, there has been an increased interest in the relative value of serologic tests for the diagnosis of syphilis. At these conferences the test of only one serologist of the United States was presented for consideration. There are a number of excellent serologists in this country, many of whom have described original modifications of the complement-fixation and precipitation tests for syphilis. It is felt that the tests of these workers merit consideration.

The United States Public Health Service is co-operating with the American Society of Clinical Pathologists in the drafting of a plan to evaluate independently serologic proeedure for the diagnosis of syphilis in this country. Briefly, the plan contemplates the collection of specimens of blood from at least 1,000 individuals and the distribution of comparable specimens to the laboratories of serologists who have described an original modification of a complement-fixation or precipitation test for the diagnosis. The donors of the specimens will be carefully selected so as to measure both the specificity and sensitivity of the serologic procedure. The sending of speci-

mens to workers at considerable distance from the points of collection will be expedited by the use of the most modern transportation facilities, while the delivery of specimens to nearby serologsts will be delayed so as to make the delivery time approximate that for those workers at the more remote points.

A committee of five members consisting of two specialists in the field of clinical syphilology, two members of the American Society of Clinical Pathologists, and one officer of the United States Public Health Service will organize the plan of study and, after all laboratory reports have been submitted by participating serologists, will interpret the results on the basis of clinical findings. The collection of the specimens will begin about December 1. 1934 and a number of serologists will be invited to take part in the evaluation scheme.

It is possible that the name of some serologist who has described an original modification of a test for syphilis may have been inadvertently omitted. Any serologist desiring to participate will be extended an invitation upon presentation of suitable proof as to the originality of his modification of a serologic test. A brief description of the plan will also be sent to those workers who may be interested.

Correspondence should be addressed to the Surgeon General, United States Public Health Service, Washington, D. C.

## LEAGUE OF CHRISTIAN PHYSICIANS

The League will hold its annual service in the Baptist Church, Harlan, on September 30, which is the Sunday preceding the meeting of the State Medical Association. The physicians of the Association, the pastors and their congregations of the churches in Harlan, Middlesboro, Pineville, Barbourville, Corbin and Williamsburg, have been invited to join in this service. Dr. L. E. Smith, Secretary of the State Tuberculosis Association, will be the speaker.

## PLENTY OF ROOM FOR ALL

No one desiring to attend the Annual Meeting at Harlan, need be apprehensive that accommodations will not be available.

Arrangements have been completed to take care of at least eight hundred guests. Come and bring your wife and other members of the family. There is plenty of room for everybody.

If reservations have not already been made, write Dr. W.Clark Bailey, Harlan, at once.

## THE PEDIATRIC POST GRADUATE COURSE

In this issue of the JOURNAL is published the complete program of the course in Pediatries which is offered to the physicians of Kentucky at the Children's Free Hospital, Louisville, every Wednesday from 10 to 3, beginning October 3 through to December 12, weekly.

This is an unusual opportunity, not only for those who desire to specialize in Pediatries, but gives the general practitioner a general knowledge of all the newer things in medicine that can be applied not only to children but to grown-ups. Dr. Philip F. Barbour, Chairman, is extending a cordial invitation to every doctor in Kentucky to participate in this course, and we hope that as many as possible will accept this unusual opportunity.



**Dr. Phillip F. Barbour, Louisville.**

President League of Christian Physicians, Chairman Extension Course, Chairman Pediatric Post Graduate Course and Past President of Kentucky State Medical Association.

## OFFICIAL ANNOUNCEMENTS

### PROGRAM

EIGHTY-FOURTH ANNUAL MEETING OF THE KENTUCKY STATE MEDICAL ASSOCIATION
METHODIST EPISCOPAL CHURCH,
HARLAN,
OCTOBER 1, 2, 3 AND 4, 1934

COMMITTEE ON ARRANGEMENTS

W. Clark Bailey — W. P. Cawood
W. R. Parks — H. K. Buttermore
C. R. Petty — M. L. Gunn

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Irvin Abell .....Louisville
A. T. McCormack.....Louisville

Orator in Surgery
I. A. Arnold.....Louisville

Orator in Medicine
W. J. Shelton.....Mayfield

MEETING PLACE

The Eighty-Fourth Annual Meeting of the Kentucky State Medical Association will convene in the Auditorium, Methodist Episcopal Church, Harlan, on Tuesday, Wednesday and Thursday, October 2, 3, and 4, 1934.

The Woman's Auxiliary, Kentucky State Medical Association, will meet on first floor, Methodist Episcopal Church, Harlan, on Monday, Tuesday and Wednesday, October 1, 2 and 3, 1934.

HOUSE OF DELEGATES

The House of Delegates of the Kentucky State Medical Association will convene on first floor, Methodist Episcopal Church, Harlan, at 2:00 P. M., on Monday, October 1st.

THE REGISTRATION DEPARTMENT

The Registration Department will be open on first floor, Methodist Episcopal Church, Harlan, from 10:00 A. M. to 5:00 P. M., Tuesday and Wednesday, October 2nd and 3rd; and from 8:30 A. M. to 11:00 A. M. on Thursday, October 4th.

The Registration Department of the Woman's Auxiliary will be open on first floor, Methodist Episcopal Church, Harlan, on Monday, October 1st, from 9:00 A. M. to 4:00 P.M. and on Tuesday and Wednesday, October 2nd and 3rd, from 9:00 A. M. to 12 M.

TUESDAY, OCTOBER 2nd

9:00 A. M.—GENERAL MEETING

Call to Order by the President, W. M. Martin, Louellen
Invocation, Pastor Methodist Episcopal Church, Harlan.
Addresses of Welcome, L. O. Smith, M. D., Mayor of Harlan; Abner C. Jones, Harlan
Response to Address of Welcome, H. H. Hunt, M. D., Mayfield.
Installation of President.
Memorial by E. D. Turner, M. D., Cave City.
Report of Committee on Arrangements, W. C. Bailey, Harlan.

10:00 A. M.—SCIENTIFIC SESSION

1. Lead Poison in Children, William Woodward Nicholson, M. D., Louisville.
2. Appendicitis in Children, Wm. Edgar Fallis, M. D., Louisville.
3. Treatment of Diarrhea in Infancy, James W. Bruce, M. D., Louisville.
4. Diagnosis and Treatment of Congenital Pyloric Stenosis, E. S. Allen, M. D, Louisville.

12:00 M—SPECIAL ORDER

ORATION IN MEDICINE

Some Mutual Interests of Physicians and Patients, W. J. Shelton, M. D., Mayfield.

2:00 P. M.—SCIENTIFIC SESSION

1. Feeding the Diabetic, L. Lyne Smith, M. D., Louisville.
2. Amebiasis, Frank M. Stites, M. D., Louisville.
3. Treatment of the Tuberculous in the Home, J. E. Edwards, M. D., Lancaster.
4. Some Newer Aspects of Arthritis, A. Clayton McCarty, M. D., Louisville.
5. Endocrine, Vitamine and Allergen Relativity, R. Alexander Bate, M. D., Louisville.

4:00 P. M.—Round Tables

Surgery, Irvin Abell, M. D., Louisville.

Pediatries, Philip F. Barbour, M. D., Louisville.

Eye, Ear, Nose and Throat, H. G. Reynolds, M. D., Paducah.

Medicine, Virgil Simpson, M. D., Louisville.

8:00 P. M.—Public Meeting

President's Address, C. C. Howard, M. D., Glasgow.

Cancer of the Uterus. Illustrated by Slides and Pathological Specimens, Louis Frank, M. D., Louisville.

WEDNESDAY, OCTOBER 3rd

8:00 A. M.—Scientific Session

1. The Wearing of Glasses—As It Relates to Medicine, Adolph O. Pfingst, M. D, Louisville.
2. The Treatment of Tetanus, E. B. Bradley, M. D., Lexington.
3. Drug Addicts, Thomas J. Criee, M. D., Louisville.
4. Tentative Subject, Quo Vadis, N. M. Owensby, M. D., Atlanta, Ga.
5. The Trend of Modern Medicine, C. G. McLean, M. D., Lexington.
6. The Business Side of Medicine, W. B. Atkinson, M. D., Campbellsville.

12:00 M.—Special Order

Oration in Surgery

The Fracture Problem—Present and Future Status, I. A. Arnold, M. D., Louisville.

2:00 P. M.—Scientific Session

1. Spinal Cord Tumors, Symptomatology and Differential Diagnosis, Franklin Jelsma, M. D., Louisville.
2. Malignant Tumors of the Thorax and Upper Abdomen, D. Y. Keith, M. D., Louisville
3. Some End Results of Plastic Surgery (Moving Picture Demonstration), Francis M. Massie, M. D., Lexington.
4. Study of 100 Cases of Ectopic Pregnancy, W. O. Johnson, M. D., Louisville.

4:00 P. M.—Round Tables

Surgery, J. H. Blackburn, M. D., Bowling Green.

Medicine, Morris Flexner, M. D., Louisville.

Obstetrics, Edward Speidel, M. D., Louisville.

Orthopedics, W. Barnett Owen, M. D., Louisville.

Laboratory Procedures, L. H. South, M. D., Louisville.

8:00 P. M.—Public Meeting

Annual Oration; Pulmonary Emphysema, A Sequelae of Pulmonary Tuberculosis, Henry Kennon Dunham, M. D., Cincinnati, Ohio.

Address, The Management of Goiter and Results in One Thousand Operative Cases, With Lantern Slides, Wm. D. Haggard, M. D., Nashville, Tennessee.

THURSDAY, OCTOBER 4th

8:00 A. M.—Scientific Session

1. Internal Hemorrhoids: Treatment by Non-Surgical Methods, Rufus C. Alley, M. D., Lexington.
2. The Etiology and Surgical Treatment of Anal Fistula, (Pictures) Wm. J. Martin, M. D., Louisville.
3. A Plea for Better Obstetrics, J. M. English, M. D., Elizabethtown.
4. Chorea in Pregnancy, C. G. Daugherty, M. D., Paris.
5. Laboratory Tests for Pregnancy, Harry M. Weeter, M. D., Louisville.

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## PROGRAM

Twelfth Annual Meeting of the Woman's Auxiliary to the Kentucky State Medical Association

MONDAY, OCTOBER 1st

9:00 A. M.—Registration, Methodist Episcopal Church

10:00 A. M.—Study Class, Mrs. L. Lyne Smith, Louisville, Presiding

(a) Book Reviews:

Our Movie Made Children, by Henry James Forman, Mrs. Emmett F. Horine, Louisville

The Joy of Living—An Autobiography, by Franklin H. Martin, M. D., Mrs. Philip E. Blackerby, Louisville

(b) "Current Events," Mrs. Oliver H. Kelsall, Louisville

2:00 P. M.—Round Table Conference, Mrs. Philip F. Barbour, Louisville, Presiding.

Tensions of Childhood, Tensions of the Home, School, Recreation, Mrs. Emmet F. Horine, Louisville

Discussion led by Mrs. John D. Trawick, Louisville

Preventive Measures for Child Health, Dr. Lillian H. South, Louisville

New Research for the Prevention and Alleviation of Poliomyelitis

Discussion led by Mrs. Luther Bach, Bellevue

3:45 P. M.—Pre-Convention Board Meeting, Mrs. B. K. Menefee, Covington, Presiding

8:00 P. M.—President's Report to the House of Delegates, Mrs. B. K. Menefee, Covington

TUESDAY, OCTOBER 2nd

9:00 A. M.—Joint Meeting with the Kentucky State Medical Association. Installation of President of the Kentucky State Medical Association.

9:45 A. M.—General Meeting, Opening Session

Presiding Officer, Mrs. B. K. Menefee, Covington
Song—Leader, Mrs. William E. Riley, Harlan
Invocation, Pastor, Methodist Episcopal Church, Harlan
Address of Welcome, Mrs. Joseph W. Nolan, Harlan
Response to Welcome, Mrs. L. Lyne Smith, Louisville
Message from Kentucky State Medical Association:
W. M. Martin, Louellen, President
C. C. Howard, Glasgow, President-Elect
Advisory Council:
W. E. Gardner, Louisville
A. T. McCormack, Louisville
V. A. Stilley, Benton
Reports of Committees:
Arrangements, Mrs. Clark Bailey, Harlan
Credentials, Mrs. William R. Parks, Harlan
Roll Call
Minutes of the Eleventh Annual Meeting
Report of the President
Reports of County Delegates
Announcements
In Memoriam, Mrs. Luther Bach, Bellevue
12:30 P. M.—Luncheon, Subscription 50 cents, Harlan Baptist Church
Afternoon—Mountain Drive, followed by Tea at the home of Mrs. Carlisle Ragsdale Petty, Lynch, honoring the President and the President-Elect
8:00 P. M.—Public Meeting
Address of President of Kentucky State Medical Association, C. C. Howard, Glasgow

WEDNESDAY, OCTOBER 3rd

9:00 A. M.—General Meeting, Second Session
Presiding Officer, Mrs. B. K. Menefee, Covington
Reports:
Officers
Chairmen of Committees
Delegates:
American Medical Association Auxiliary, Mrs. J. I. Greenwell, New Haven
Southern Medical Association Auxiliary, Mrs. A. D. Steely, Bardstown
Unfinished Business
New Business
Report of Committee on Resolutions
Report of Committee on Credentials
Report of Nominating Committee
Election of Officers
Introduction of New Officers
Installation
Address of the President, Mrs. J. I. Greenwell, New Haven
Adjournment
12:30 P. M.—Annual Luncheon, Subscription 75c, Harlan County Club
Toastmistress, Mrs. B. K. Menefee, Covington
Honoring Mrs. Ruby Laffoon, Frankfort; Mrs. Robert W. Tomlinson, Wilmington, Delaware, President, American Medical Auxiliary; Mrs. Southgate Leigh, Norfolk, Virginia, President, Southern Medical Auxiliary.
Address, Mrs. Mary Breckinridge, R. N., Volunteer Director, Frontier Nursing Service, Inc., Wendover
Special Guests Representing the Kentucky State Medical Association:
W. M. Martin, Louellen
C. C. Howard, Glasgow
Our Advisory Council:
W. E. Gardner, Louisville
A. T. McCormack, Louisville
V. A. Stilley, Benton
2:30 P. M.—Post-Convention Board Meeting, Mrs. J. I. Greenwell, New Haven, Presiding
4.00 P. M.—Tea—At the home of Mrs. H. C. Smith, Harlan, in honor of the President, the newly elected officers and the special guests: Mrs. Ruby Laffoon; Mrs. Robert W. Tomlinson; Mrs. Southgate Leigh; Mrs. Mary Breckinridge

THURSDAY, OCTOBER 4th

Golf—Harlan Country Club, Mrs. Preston O. Lewis, Chairman

OFFICERS OF THE WOMAN'S AUXILIARY TO THE KENTUCKY STATE MEDICAL ASSOCIATION
1934

President, Mrs. B. K. Menefee, Covington
President-Elect, Mrs. J. I. Greenwell, New Haven
Vice-Presidents, Mrs. Charles A. Menefee, Covington; Mrs. Ben B. Keys, Murray; Mrs. Harland V. Usher, Sedalia; Mrs. C. C. Threlkeld, Morgantown
Recording Secretary, Mrs. William T. Little, Calvert City
Corresponding Secretary, Mrs. Luther Bach, Bellevue
Treasurer, Mrs. Curt H. Krieger, Louisville
Parliamentarian, Mrs. George S. Brock, London

Woman's Auxiliary Section, Kentucky Medical Journal

Editor, Mrs. A. T. McCormack, Louisville
Business Manager, Mrs. Peter Guntermann, Louisville

## PROGRAM

### Of Post Graduate Course in Pediatrics Children's Free Hospital, Louisville,

### October 10 Through December 12 Weekly

Schedule of Course—Diseases of Children

The Pediatricians of Louisville under the auspices of the American Academy of Pediatrics have outlined an intensive course in pediatrics to be given at the Children's Free Hospital.

Drs. J. H. Pritchett, J. W. Bruce Lee Palmer, H. S. Andrews, W. W. Nicholson, T. Cook Smith and Philip F. Barbour will conduct the course.

The program of subjects is listed as follows:

October 10, 1934

10-11 Intracranial Birth Injury,
Dr. Pritchett
11-12 The Feeding of Infants and Children,
Dr. Bruce
1- 2 The Crying Baby,
Dr. Barbour
2- 3 Deficiency Diseases,
Dr. Smith

October 17, 1934

10-11 The First Week of New Born Life,
Dr. Palmer
11-12 The Feeding of Infants and Children,
Dr. Bruce
1- 2 The Mentally Defective Child
Dr. Barbour
2- 3 Deficiency Diseases,
Dr. Smith

October 24, 1934

10-11 Infectious Diseases
Dr. Pritchett
11-12 Diarrhoea,
Dr. Bruce
1- 2 Anemia in Children,
Dr. Andrews
2- 3 Intravenous, Intraperitoneal and Subcutaneous Therapy,
Dr. Nicholson

October 31, 1934

10-11 Infectious Diseases,
Dr. Pritchett
11-12 Upper Respiratory Infections,
Dr. Palmer
1- 2 Disease of the Ductless Glands,
Dr. Barbour
2- 3 Pneumonia,
Dr. Smith

November 9, 1934

10-11 Infectious Diseases,
Dr. Pritchett
11-12 Hypertrophic Pyloric Stenosis, Pylorospasm, Intussusception,
Dr. Bruce
1- 2 Leukemia,
Dr. Andrews
2- 3 Diseases of the Pleura,
Dr. Smith

November 14, 1934

10-11 Immunization,
Dr. Palmer
11-12 Celiac and Hirschsprung Disease,
Dr. Andrews
1- 2 Abdominal Pain,
Dr. Barbour
2- 3 Congenital Syphilis,
Dr. Nicholson

November 21, 1934

10-11 Anterior Poliomyelitis,
Dr. Palmer
11-12 Dehydration and Acidosis,
Dr. Bruce
1- 2 Behaviour Problems and Adolescent Child,
Dr. Barbour
2- 3 Diseases of the Meninges,
Dr. Nicholson

November 28, 1934

10-11 Diseases of the Kidneys,
Dr. Andrews
11-12 Allergy In Children,
Dr. Palmer
1- 2 Childhood Tuberculosis,
Dr. Smith
2- 3 Diseases of the Heart,
Dr. Nicholson

December 5, 1934

10-11 Rheumatism,
Dr. Pritchett
11-12 Encephalitis,
Dr. Andrews
1- 2 Convulsions,
Dr. Barbour
2- 3 Childhood Tuberculosis,
Dr. Smith

December 12, 1934

10-11 Chorea and Epilepsy,
Dr. Pritchett
11-12 Burns,
Dr. Bruce
1- 2 Diabetes In Children,
Dr. Andrews
2- 3 Lead Intoxication,
Dr. Nicholson

Any other subjects that may be desired can be introduced into the course.

The charge for the course will be $5.00 and it will be carried through whether the attendance is large or small.

Philip F. Barbour,
State Chairman, American Academy of Pediatrics.

## ORIGINAL ARTICLES

### SYMPOSIUM ON AMEBIASIS
### MEDICAL ASPECTS OF AMEBIASIS*

Morris Flexner, M. D.

Louisville.

The pages of medical history are replete with diseases, both common and rare, appearing from time to time in unusual, atypical forms. Many examples come to mind. Only recently we have seen an epidemic of encephalitis, attacking the meninges and higher centers, affecting occasionally the basal ganglia, the main point of attacks in the epidemic of 1918-21; giving an entirely different clinical and somewhat different pathological picture and prognosis. Measles, scarlet fever, smallpox, epidemic meningitis may attack as mild innocent offenders, so insidious in their approach at times as to be difficult of recognition or again strike fatally and quickly with the vehemence of a lethal potion.

Recently we have seen amebiasis, a disease recognized clinically in this country for the past 44 years, when it was first reported by Doctor Osler, make its presence known in a variety of clinical pictures, so confusing that it has taxed the diagnostic ability of our keenest medical and surgical observers to even suspect its presence. Were the 721 cases of amebiasis reported to date by Doctor H. Bundesen as originating in Chicago all simple cases of amoebic dysentery or amebiasis in its usual form, this meeting would not be occurring tonight. A few questions arise; 1st. Were we dealing with a new or atypical type of the amoeba? Morphologically there was nothing unusual about them in the cases where they were found. 2nd. Did the amoebae exist in a state of symbiosis with some form of bacteria, or protozoa or virus that made them behave so peculiarly? Such a union has not been demonstrated. 3rd. Were the infecting doses unusually large? This point will be handled later more in detail for it seems to be the crux to the situation.

One of the reasons for keeping this topic alive for the next few weeks is because of the fact that of the 20,000,000 people who visited the Chicago Fair, only these 721 cases have been reported, in 206 cities with about 40 deaths, but 1,049 carriers have been located. Undoubtedly these figures must fall far short of the true number of cases both recognized and existing, unrecognized. Many of the cases that were untreated have changed into the "carrier" or "infectious" state and are now a source of danger to their families and communities. It is certainly true that of the number infected in Chicago up to the time the Fair closed in November the great majority that will have developed clinical symptoms will have done so by now. This statement is based on the experiments of Sellards and Walker in the Phillippines in 1913, when they fed cysts and trophozoites of Endameba Histolytica to twenty volunteers. The motile amoebae were enclosed in gelatin capsules and the acidity of the gastric contents neutralized. Seventeen became infected on one feeding; one required three feedings; two did not get the disease. Of this number only four developed dysentery. Of particular interest in these four cases according to Sellards is the number of days elapsing between the ingestion and symptoms of the disease which were 20, 57, 87, and 95 days respectively; the intervals between the appearance of amoebae in the stools and the development of symptoms was 9, 56, 76, and 94 days respectively. There is some consolation to be gained from considering these facts.

Bundesen's last report, (J. A. M. A. Feb. 3, 1934) clears up many points that were disturbing everyone interested in this disease. To date most of these cases had been blamed on food handlers in two hotels, many of whom were found to be carriers. It is true Kofoid had shown that the average carrier passes about 14,000,000 cysts a day but it has also been stated by James that it takes an appreciable sized piece of infected fecal material to transmit the disease. Only the most unbelievable gross personal negligence on the part of the food handlers could have transmitted this disease to the numbers reported. The severity of the infection was not easily explained by the swallowing of an occasional cyst. My own idea, and that of many others, was that raw vegetables were being served that had grown on farms in which the manure pile had been infected by human excreta from carriers of Endameba Histolytica. The true explanation was at the same time a shock and a revelation. The idea occurred to no one that at this time with our present knowledge and laws governing Sanitary Engineering a hotel could be so constructed that sewers could overflow into its refrigerators and ice house or that the drinking water supply could be contaminated by sewage. These facts were not admitted by the hotels at fault but revealed by a special committee assembled by Doctor Bundesen. To quote two of their paragraphs: "These observations offer presumptive evidence that structural defects, either permanently or intermittently operative, in one or both of the hotels were associated with the development of the unusual incidence of amebiasis. Although similar defective structural arrangements no doubt exists in Chicago as well as

* Read before the Jefferson County Medical Society.

in other cities of the United States, only special and fortuitous circumstances may bring them into play to cause a severe epidemic.

This conclusion is further strengthened by the knowledge that experimentally, extremely large doses of E. Histolytica have to be administered to both man and animal to produce infections comparable to those obtained in this epidemic, in which the incubation period was short, the lesions were severe and the exposures were frequently minimal. These features were out of proportion to what would have been expected if smaller doses had been obtained by contamination from fingers of food handlers."

At this point I wish to touch upon some of the important facts about which we have definite knowledge. There seems no doubt now but that the etiological agent is Endameba Histolytica which occurs in two forms, the active, motile, vegetative form or trophozoite, and the encysted form. In the acute attacks as a rule only the active form is found. This is not the dangerous type, for if ingested the amoebae are killed by the gastric juice. However at times in the intestinal tract when "unfavorable conditions" occur, such as a general improvement in health or too little treatment, the vegetative form may become encysted. The cysts are the main offenders: they live long under favorable conditions of moisture and resist gastric juice. If ingested they usually develop into trophozoites by the time they reach the cecum and attempt to take up a permanent lodging. Craig estimates that between 5 and 10 per cent of the populance of the U. S. A. are infected. Recently Sumerlin in examining stools in 1,336 adults in private practice in California found only 2.1 per cent infected. According to Dunn 40 per cent of the Chinese in Shanghai have amoebic cysts in their stools. Undoubtedly most infections come from filth such as polluted food, dirty fingers, or contaminated water, as indicated above. But flies in whose intestinal tract the cysts live 48 hours, are also possibilities.

Clinically, Craig divides the disease into four different types:

1st. Healthy carriers, who pass cysts in their stools but are apparently perfectly well. These are the most dangerous.

2nd. Those cases which show indefinite gastro-intestinal and nervous symptoms and are also usually grouped as "carriers." They have anorexia, gaseous, colicky distention, alternate attacks of diarrhoea and constipation, pain in the lower right quadrant; frequent headaches, disturbed sleep. They may have leg ache and there is a general lack of energy.

Group 3 is an aggravated form of group 2; the periods of diarrhoea and constipation each lasting longer. The stools are semi-fluid, contain visible mucus but no blood. Painful gaseous distention may occur. This type may get to the acute dysentary state or gradually improve. Frequently they are diagnosed "chronic appendicitis."

4. This group is the acute or chronic dysentery type—rare in temperate or subtropical climates. Here a severe colicky form exists, with a frequent urge to defecate. They have nausea, vomiting and weakness and at times tenesmus with the passage of small stools consisting largely of bloody mucus. In severe cases 30-40 stools may occur in twenty-four hours. Fever may be present but not always.

Craig refers casually to the chronic type in which "physically there is always more or less tenderness over the colon in certain areas and marked thickening of the colon can usually be detected, especially in the right iliac region and the ascending and descending colon." In the literature I have reviewed, excluding recent reports, I have found practically no reference to the puzzling type of infection experienced in this country. Runyan, a surgeon in the employ of the United Fruit Company in Panama in 1925 reported four interesting cases. At that time he noted that the condition is undescribed in the voluminous literature on the subject, with one possible exception, a report from Montevideo that was unobtainable. To quote him, "The rare conditions referred to is the massive type of ulceration due to chronic amebic infection, causing enormous thickening of the wall of the bowel—a condition which, in turn affected not only the cecum but the terminal ileum." His first case was thought to be a tumor of the kidney, the second, cancer of the cecum. He had good luck surgically, excising the cecum, part of the ascending colon and part of the terminal ileum. An end to end anastomosis of ileum into ascending colon was made and three out of four cases recovered. The striking thing to me is that in such a tremendous amoebic experience as these men had in Panama so few of these should have appeared. Again, are we dealing with an amoeba of unusual virulence or did the massive doses cause this particular type?

I do not wish to give the impression that no typical cases occurred, as described by Craig in the first three groups. They did—and were not difficult to handle or care as a rule. But the disturbing cases that caused fatal errors were undoubtedly mostly those of "infiltration." These had a characteristic doughy feel to the cecum, suggesting a mass, accompanied by a low grade fever and great prostration. At times, the symptoms were

definitely those of appendicitis, acute or chronic, and some did show actual involvement. It is in this group that the x-ray was helpful by first proving that those cases were not malignancies. Characteristic changes of the head of the cecum with widely open ileo cecal valves are now regarded with great suspicion. Some of these lesions appeared in the rectum and were thought carcinoma even after direct inspection and biosy. It was in this group that the surgical mortality was so high, for unless some acute complication occurred demanding an operation, these cases were handled medically with far greater success.

### Diagnosis

The diagnosis of amebiasis may be quite simple or extremely difficult. Fresh, warm stools should be obtained, preferably after a morning dose of Epsom or other suitable salts. 1st. Examined on a warm stage the active forms may be seen. Ingested red blood cells are an essential part of their insignia. 2nd. If no active forms are present, cysts containing 4 nuclei must be found. It is concerning the recognition of the cysts that the authorities issue lengthy warnings. There are four other types in the stool easily confused by the inexpert. Staining the cysts helps. Gradwohl feels they must be found before a positive diagnosis of the disease is made.

3rd. Culture: Amoebae may be cultured fairly well on a liver infusion agar, horse serum and bacto rice powder media, described by Cleveland and Collier.

4th. Complement fixation: We are probably lax in not using this oftener. In 1000 cases described by Craig, 175 gave positive reactions. Of this number 90 per cent showed endameba histolytica in their stools. Of the 835 negative, ameba were found in the stools of only 12 or 14 per cent.

5th. Proctoscopic examination: Characteristic ulcers may be seen at times and excellent specimens for microscopic examination may be obtained. I gently scrape the bowel wall with a small dull spoon such as surgeons use to fish for gall stones.

6th. Clinical Diagnosis without definitely finding amoebic forms: This undoubtedly should be discouraged but on the other hand—with conditions as they are at present—in a suggestive case, with positive x-ray findings and no parasites found, I see no harm in treatment. I have had two such cases with excellent response and no regrets save in my pure scientific conscience. Dunn advocates treating all cases diagnosed chronic appendicitis in Shanghai for amoebae even if the stools are negative, to see if the symptoms persist.

### Complications

The complications of the disease are largely surgical and will only be mentioned in passing. Liver abscess is by far the most important and interesting and difficult at times to diagnose. Appendicitis has been referred to. Tremendous hemorrhages from the bowel may call for heroic efforts. Spontaneous perforation of an ulcer or slow leaks may produce confusing pictures. Amoebic abscess of the lung, brain, spleen and skin may occur. Those from the lung may be by direct extension through the diaphragm from the liver abscess. In the old chronic cases after healing, partial occlusion of the large bowel due to adhesions or cicatrices may exist.

### Treatment

Fortunately in the treatment of the disease we have at hand a number of drugs that are practically specifics. The time honored ipecac, represented today by its alkaloid, emetin, deserves first mention. It is best given intramuscularly ½ gr. to ¾ gr. twice a day for 4 to 6 days. It is of particular value in the acute dysentery state and is an aid in the complications. Its danger lies in its toxic effect in large doses and it is a safe rule never to give over 12 grains as fatalities have occurred. Too much reliance must not be placed on this drug alone as it seldom cures the disease. It may also be given in the form of emetine-bismuth-iodide-enteric coated pills, 3 grains each, one each night for 12 nights.

Since undoubtedly the combined or mixed treatment is best, the next question arises as to which drugs act better with emetine, the arsenicals or the iodoxyquinoline group. There are excellent authorities for each. Personally I prefer giving a short course of either Stovarsol (Acetarsone) or Treparsol at the same time as the Emetin and then follow with Yatren. Treparsol is usually chosen because it is less toxic. The dose is 1 tablet, (4 grains) 3 times a day for 4 days. There is danger in arsenic poisoning from these drugs if continued longer, arsenical neuritis and dermatitis exfolliativa both being reported. The tablets are best chewed. Carbosone, a new arsenical, is satisfactory and may be substituted. The dose is one capsule (0.25 gms.) twice a day for ten days. Carbosone may also be given in the form of a retention enema. By a California group, who recently reported on the therapy of this disease, it is claimed to be the most satisfactory drug in use. One point to be remembered is that the arsenicals are contraindicated in liver damage.

In the iodoxyquinoline group there are three contenders with four names. Yatren and Chiniofon are the same drug. Anayodin is a sodium bicarbonate derivative. Their action is similar and they are used both by

mouth and in solution as retention enemas. Vioform (Iodochlor-hydroxy-quinoline) was reported by the California group as being the most efficient of the three. All of these are of value in "carrier" or mildly infectious states or combined with Emetin in the acute. I have used Yatren effectively in two ways, 3 four grain keratin coated pills after meals for six days, rest three or four days and then repeat. The other method is that of Dunn who gives 10 four grain pills at bed time for four nights, then stops a night until from 100 to 200 pills have been given altogether, depending on the results. Bismuth subnitrate has been supplanted by the above mentioned drugs.

One very important point to remember is that no matter how fast the stools clear up under treatment every case should be examined at definite intervals for at least four to six months. The prognosis in the acute stages is good but in the old chronic cases may be poor.

In closing I wish to mention diet. Ordinarily these cases are handled as cases of colitis, the acute ones fed mainly liquid or soft foods and put at rest in bed. Coarse irritating foods with bulkage are avoided. In the chronic cases Dunn feels that the presence of vitamins is essential so he includes one quart of milk, leafy vegetables, butter, eggs and some form of cod liver oil.

Prophylaxis has not been dealt with as the modes of infection have been emphasized and the means of control are evident.

Two diversified conclusions may be drawn from a survey of this epidemic; (1) The use of surgery in cases of suspected amebiasis should be avoided. (2) There has been a complete lack of social conscience and responsibility on the part of the management of the two hotels involved in this scandal. Existing sanitary legislation has failed entirely to control the situation.

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**Elimination of Brucella Abortus with the Milk of "Carrier" Cows.**—Thompson examined the milk of ten high producing cows that never manifested clinical symptoms of infectious abortion but whose blood serum showed agglutinins for Brucella abortus in dilutions of from 1:50 to 1:500 for the presence of Brucella abortus at intervals of thirty days over an entire lactation period by both the direct petri plate method and inoculation of guinea-pigs. The results indicate that moculation of guinea-pigs is slightly more efficient than the direct peri plate method of examining milk for the detection of Brucella abortus. The results further demonstrate that Brucella abortus may be constantly eliminated with the milk of cows classified as 'healthy carriers."

## AMEBIASIS, SURGICAL ASPECTS*

H. H. Hagan, M. D.

Louisville.

Amebiasis is primarily a medical disease encountered in tropical climates. The surgeons of the United States have had very limited opportunity to study the surgical manifestations of amebiasis—experience for the most part being limited to the chronic or subacute cases and hepatic abscesses. In fact, the cases developing in the recent Chicago epidemic were so widely disseminated that no one had an opportunity to study a large group of these cases. Therefore, our own surgical literature on the subject is limited. Lund has recently reported "four fatal cases of unsuspected amebiasis" in three of which there was surgical interference. The foreign literature on the surgical aspects of this condition is not voluminous; but much interesting and instructive data is set forth in monographs of Sir Leonard Rogers, Sir Frank Connor, Mr. Zachary Cope and Major Chatterji. For a considerable period of years they have been students of the wealth of clinical material which has been available in India and tropical countries. Cope prefaced his Hunterion lectures on this subject with the remark that "The literature of the surgical aspects of dysentery is scanty, scattered and not readily available. With the difficulties and mistakes in my experience in Mesopotamia serves as sufficient excuse for the present presentation."

The surgeon may encounter amebiasis under three general conditions:

1. Dysentery may develop as a complication of a surgical condition.
2. It may simulate various surgical conditions, or dysenteric symptoms may be produced by certain diseases which demand surgical treatment.
3. Surgical complications may develop in the course of this disease.

I. Dysentery Complicating Surgical Conditions.

A latent amebic infection may be activated by a surgical operation, or by a prolonged postoperative course, which has lowered resistance The pre- and post-operative purgations may tend to awaken the disease and should be avoided in suspected surgical cases.

II. Simulation of Surgical Conditions.

The symptoms of several common surgical conditions may be simulated by amebic dysentery.

(a) Hemorrhoids are a common complication of dysentery. This is accounted for by the congestion and irritation of the hemorrhoidal area, and will be increased by the

*Read before the Jefferson County Medical Society.

portal congestion of a hepatitis.

(b) Appendicitis is the surgical condition which has caused most difficulty in the differential diagnosis, if we may judge from the cases reported in recent literature. The reason for this fact can be explained on a pathological basis. Amebic colitis develops insidiously and the caecum is an early site of attack. A considerable pathological lesion may be present and give only trivial symptoms of dysentery—in fact, the patient may actually complain of constipation. However, the localized ulceration of the caecum may cause considerable swelling and thickening of the gut. If then, as Cope states, "in such a case, pain is suddenly complained of in the right iliac fossa, the temperature becomes elevated, and vomiting occurs, and on examination a tender lump is found in the appendicular region, the conditions for a false diagnosis are evident." And we should add that these patients usually have a high leucocyte count and may have a negative stool examination. The ulcerations of the caecum may cause perforation to take place insidiously, and produce an abscess which can not be distinguished from an appendicular abscess, except by history or by positive stool examination. These abscesses must be opened and are more likely to heal promptly and without complications, if emetine therapy is instituted. Mr. McNeill Love reports a case of ulceration of the caecum in which he operated just prior to perforation. A small slough was removed and the caecum successfully sutured.

(c) Carcinoma of the cecum, or carcinoma of the rectum, may be simulated in the more chronic cases of amebic dysentery with extensive ulceration and considerable thickening of the gut wall. There is also danger of diagnosing and treating cancer of the rectum or colon as amebic ulceration.

(d) In amebic hepatitis, the tenderness over the hepatic area, accompanied by fever, vomiting and leucocytosis, may lead to an incorrect diagnosis of cholecystitis.

(e) Cases are on record in which the symptoms have simulated tuberculous peritonitis, intestinal obstruction, etc.

The above suggests some of the diagnostic pitfalls which the surgeon must avoid in suspected amebic dysentery. The fact that there are undoubtedly many ameba carriers in this country, increases the possibility of finding the condition in individuals who have not lived in the tropics.

III. Surgical Complications of Amebiasis.

In considering the surgical complications of this disease we should keep in mind a few outstanding facts regarding the pathology of the disease. It is well known that the characteristic lesion of the disease is found in the large intestine. However, it may occasionally extend to other organs, particularly the liver, before there has been any pronounced symptoms of dysentery. The large intestine, the liver and the lung are the body tissues most frequently involved. The lung is usually involved by direct extension and rupture into the branches of an undiagnosed, or an untreated hepatic abscess. However, it seems that few tissues of the body are immuned from atypical invasion of the entameba histolytica. Invasions of the bone marrow, brain abscess, abscess of the spleen, etc., have been reported. Connor states that "It occasionally happens that various aberrant extensions occur, the commonest being by way of the portal circulation to the liver, more rarely to the brain and other organs. Neighboring areas, in close relation to the large bowel, may also be involved by direct extension or by means of the lymphatic channels. Such amebae as escape to find a new habitat in adjacent or far-distant organs grow readily at the expense of the living tissues, and do not ordinarily undergo cyst formation. From a surgical point of view, these secondary pathological manifestations are of the gravest significance, leading to such well-known complications as amebic hepatitis, amebic abscess, etc."

(a) The most frequent surgical complications encountered are those due to local processes in the intestine. Among these lesions the most likely to develop are:

(1) Perforation of the colon, causing general peritonitis or a localized pericolic abscess.

(2) An acute edematous localized colitis.

(3) Dysentery appendicitis.

(4) A colonic pus-sac produced by extentive sloughing.

(5) Hemorrhoids.

(b) Among the more unusual late complications are:

(1) Perinephritis abscess.

(2) Stricture of the colon or rectum.

(3) Periproctitis.

(c) Amebic Hepatitis and Liver Abscess.

The possibility of perforation has previously been referred to in this paper. When we consider the very extensive ulceration, it is remarkable that perforation is so uncommon in this disease. The most common sites for perforation are in the caecum and sigmoid colon. In the more acute cases perforation may take place before protective adhesions are formed and give rise to a general peritonitis. In the usual subacute or chronic forms, the ulcerated area is protected by omental or intestinal adhesions and thereby prevents rupture, or confines the infection to a localized abscess. Councilman and Lafleur described

a case in which organisms had escaped into the peritoneal cavity through a thinned ulcer base and there had been no actual rupture with escape of intestinal contents. A situation of this type may give rise to peritoneal infection, and it is probable this type of lesion which causes the perinephritic abscess. The symptoms produced by perforation will vary according to whether there is a sudden large perforation and outpouring of fecal contents; or whether it is of insidious development and well protected by adjacent adhesions. The treatment instituted must depend upon the gravity of the situation and the condition of the patient. If there is a localized abscess it must be opened and treated as other abdominal abscesses. The problem is quite different in the case of the extremely ill patient who has had a sudden large perforation. In considering exploration for closure of the perforation the surgeon should bear in mind that the bowel wall is extremely friable and unsuitable for suture; and successful suturing of these perforations is extremely rare, while natural recovery by sealing of the perforation has been known to occur.

A localized colitis is frequently encountered because the ulceration and inflammatory process may be limited to a definite area of the bowel. This is most likely to occur in the caecum, descending colon or recto-sigmoid. It has been previously pointed out that when the lesions are confined to the caecum it is almost impossible to differentiate from a subacute appendix, except by positive stool examination, because there is a tender swelling in the right iliac region and slight fever, nausea or vomiting. It should also be emphasized that the handling of a localized colitis at the time of exploration is extremely dangerous because it may activate the process or produce hemorrhage. It should be remembered that the appendix may be involved in the process in common with the caecum. However, it will respond to the usual treatment; and will not give definite and separate symptoms unless perforation of the appendix should occur. If perforation of the appendix does occur it is necessary to operate.

Amebic hepatitis and liver abscess is the most frequently encountered complication apart from the lesion in the bowel. It seems to have been demonstrated beyond doubt that amebic hepatitis is simply the first stage toward the development of an amebic liver abscess. The general recognition of this fact, together with the ability to diagnose the condition, will prevent the development of liver abscess in most cases if emetine therapy is promptly instituted. Hepatitis may develop early during the acute attack or may occur months, or years after the initial attack. Outstanding symptoms of amebic hepatitis are enlargement of the liver, pain over the liver, fever, leucocytosis and prompt response to emetine. Liver abscess is one of the most serious of the commonly encountered complications of amebiasis. The entameba histolytica is carried from the site of the intestinal ulcer to the liver by the way of the portal vein and areas of necrosis are produced. Several of these areas of necrosis are likely to coalese to form one large abscess rather than giving rise to multiple abscesses. The material in a liver abscess is at first semisolid or caseous, later it forms thick slimy yellow, or white pus, and if there is hemorrhage the material will assume the characteristic "anchovy-sauce" appearance.

In 1891 Councilman and Latleur reported a liver abscess incidence of 20 per cent. In 1907 Davidson stated that 8.5 per cent developed abscess. Cope states that "at the present time it is a very infrequent occurrence for liver abscess to develop in a patient with recognized amebic dysentery. Most cases arise in patients who have latent amebiasis, or in those who have not been under careful treatment for a long enough time."

The symptoms may be very indefinite in the chronic cases which have developed insidiously. The more acute abscesses which develop during an active dysentery may give more definite symptoms, but as a rule,the picture is not clear cut and definite. Among the more important evidences of liver abscess are chill, fever, sweating, rapid loss of weight and strength, pain in shoulder, enlargement and tenderness of liver, and slight jaundice. Point tenderness over an enlarged liver is a most important diagnostic sign. Deep stab pressure with the finger below the costal margin, accompanied by deep respiration, will often elicit convincing tenderness. Deep point pressure in the inter-costal spaces may give evidences of an abscess situated in that location.

In the surgical treatment of liver abscess the opinion is divided as to the advisability of aspiration or open operation. In recent years a number of surgeons who have had a large experience in treating this condition have tended away from open operations and have resorted to aspiration. As early as 1902 Rogers advised surgeons against open operation because it frequently gave rise to serious secondary infection and was attended by 60 per cent mortality. Chatterji combining aspiration and emetine therapy has reported 186 cases with a mortality of 1.6 per cent or about one thirty-fifth of the old mortality rate. However, in many of these cases aspiration is impractical and dangerous and open operation is the surgical method that

should be instituted. For instance if the abscess be in the left lobe or in the spigelian lobes or bulging into the abdominal cavity, aspiration would be a very hazardous procedure. In open operation the abdominal, subcostal or transpiural route may be selected according to the location of the abscess.

## AMEBIASIS, CASE REPORTS*

Harry S. Frazier, M. D.

Louisville.

Case No. 1. E. B. C., age 31, Physician, the previous history is of little interest. The patient had measles and mumps as child and a rhinological allergy to ragweed since puberty. He was always of frail appearance but never had symptoms of gastro-intestinal disease.

The patient with a group of friends visited the World's Fair in Chicago during the first week of October and stayed at the Congress Hotel—did not eat but one or two meals there other than breakfast. Twelve days after returning to Louisville began having vague abdominal discomfort. On the 14th of October had some severe cramping and loose stools and took castor oil. Two days later consulted Dr. J. R. Morrison who advised soft diet, rest, blood count and stool examination. At this time there was 1° fever, anorexia, but no nausea and considerable pain across lower abdomen (griping in character), which was not relieved by belladonna-paregoric-bismuth mixture. There were two or three loose stools daily accompanied by severe tenesmus. Seen by me on the fourth day of illness: F. 100°, P. 100, B. P. 120/90, chest clear. Abdomen, (1) general peri-umbilical pain; (2) tenderness on palpation in both right and left lower quadrants, diarrhoea somewhat checked; (3) some distention. Suggested ice bag and white count, which was 12,600 with 72 per cent polys. On the fifth day the patient was seen by Dr. Irvin Abell, at this time the temperature was 101, W. B. C. 15,300, and through a thin abdominal wall could be felt a doughy sausage shaped mass extending up from the pelvic brim to the McBurney area a similar vague mass in the region of the splenic flexure.

Patient was removed to St. Joseph's Infirmary. Blood count prior to operation showed, Hbg. 75 per cent; R. B. C. 4,090,000; W. B. C. 25,400; P. 89 per cent; S. L. 6 per cent; L. L. 35 per cent; Eo. 1.5 per cent. Operation revealed an appendix oedematous and thickened by acute inflammation, lumen distended. Caecum distended to about 12 cm above attachment of appendix, it showed inflammatory thickening of wall with leathery rigidity. We thought at this time we were dealing with an acute colitis, possibly streptococci: and the appendix though secondary, seemed much better out.

The pathologist reported an appendix which was distended with a milky purulent material. Microscopic sections showed scattered neutrophils throughout mucosa and mucous glands, with dense round cell infiltration of walls. Diagnosis sub-acute appendicitis.

The first two post-operative days were not remarkable. On the second day the white count was 21,000, on the fourth day the temperature was normal and the white count was 9,300; Polys. 37 per cent; S. lymp. 22 per cent; L. Lymp. 2 per cent; Neut-Myelocytes 39 per cent.

In spite of satisfactory appearance of temperature curve and blood count, the patient was worse, diarrhoea again became prominent. The stools were thin, dark and foul with no gross blood. In spite of transfusions, infusions, etc., the course continued down hill until its fatal termination on the 8th post-operative day.

Autopsy limited to abdomen only: was preformed by H. M. Weeter and showed the following: Body is that of a young adult male, age 31, of slender build. There is a recently sutured lower right quadrant incision. Appendix has been removed. Ligated stump is present. Outstanding finding is complete gangrene of colon throughout. Entire organ is grayish green, walls are flabby, soft and easily torn. A black pasty semi-solid matter exists throughout. Mucosa of colon has sloughed leaving a network of trabeculae derived from fibrous tissue of submucosa. Remaining intestinal tract is not involved save that there is moderate odema and hypercemia of small intestine.

Liver shows moderate fatty changes with no abscesses. Kidneys are slightly swollen and pale. Spleen is swollen, tense and grayer than normal. Mesenteric lymph nodes appear enlarged.

Blood Culture, a post mortem blood culture gave pure strain of a streptococcus, producing green discoloration on blood agar. This organism showed no resemblance to Bargen's diplococci.

Microscopical Examinations show: Kidneys, swelling of tubular epithelium, albuminous precipitate in tubules. Peripheral capillaries are much congested.

Spleen and mesenteric lymph nodes show congestion and polymorphonuclears invading sinuses.

Colon, there is marked necrosis of entire colon involving mucosa, submucous and wall. There is extensive leucocytic reaction. Lying in submucosa and mucosa, both in tissue

*Read before the Jefferson County Medical Society.

spaces and in vessels, are rounded bodies with definite limiting membrane and occasionally a single visible nucleus. Cytoplasm is granular. Due to advanced necrosis much difficulty was encountered in finding these. Significance of presence of the indistinct ones noted was not understood until comparison was made with sections of normal colon. These bodies in my opinion are largely degenerated endamoeba histolytica.

Final Report: Fulminating amebic colitis, secondary non-hemolytic streptococcus septicemia.

Case No. 2. E. S., age 51, carpenter, the previous history is not significant except that for five or six years the patient has had much trouble with pain in the pit of stomach and bloating with gas which could be relieved by only inducing a bowel movement. There was no periodicity to these abdominal symptoms though he was most disturbed by them at night. The discomfort was always upper abdominal. This patient has never been outside of the city.

On the 13th day of December, the patient became ill. The onset was characterized by malaise and general aching across entire abdomen and back. There was fever 101, R. B. C. 4,620,000; Hbg. 76 percent; W. B. C. 21,000; Polys. 90 per cent; S. L. 8.5 per cent. L. L. 25 per cent. He was put on liquid diet and observed. On the following day white count was 18,500; still 90 per cent Polys. The patient was complaining of general soreness in abdomen, distention and the temperature varied between 100 and 102. Seen by me on the ninth day of illness, with findings generally negative except for distention and diffuse abdominal soreness. A stool examination and agglutination for paratyphosus—undulant fever groups were ordered. No ameba were found in this first stool. Two days later there was the same doughy-like sense of mass in R. L. Q. and in vicinity of splenic flexure, that I have described in the first case. Examination of another stool showed large numbers of endameba histolytica (12-28-33).

On this day the patient had several loose stools with much tenesmus, so severe in fact, that he spent much time on the bed pan, the temperature was 103° F. Daily doses of Emetine hydrochloride were commenced. (1 grain subcutaneously). After the second dose the temperature dropped to 98 and there was very striking improvement in general appearance with almost absolute symptomatic relief. The abdomen became soft and gas was expelled without difficulty; the mass in the right lower quadrant (undoubtedly swollen, indurated gut) did not entirely disappear until the twelfth day of treatment. In addition to the daily doses of one grain of emetine hydrochloride which was given subcutaneously for ten days we gave the patient every third day a retention enema of 200 cc of an approximately 2 per cent solution of chiniofon.

After the tenth day the use of emetine was discontinued and chiniofon was given by mouth gr. VIII three times a day. This dosage appeared to induce diarrhoea and colic and after five days it was reduced to gr. IV three times a day, which was maintained for two weeks more. After this emetine was again resorted to for five consecutive days, the patient allowed one week's rest from medication and then put back on chiniofon.

No ameba have been found since the sixth day of treatment and the patient has regained twelve pounds of weight.

It is planned to keep this man under treatment for a long period of time taking one of the amebacidal drugs for two weeks out of each month.

## DISCUSSION

**C. W. Dowden:** After listening to these three splendid papers, embracing a rather exhaustive review of the literature, my remarks can only serve to emphasize a few points that particularly impressed me.

The recent outbreak of amoebiasis in Chicago has brought about a rather radical change of opinion as to the incidence and symptomatology of this disease, although the treatment remains practically the same as we have known it for a good many years. Instead of being practically limited to the tropics and to the poorer class of people, we have been surprised to find amoebiasis occurring over a widely distributed area, including the most northern parts of this country and in Canada, and among the better class of people.

It seems to me that, in the consideration of amoebiasis, we must forget the old term, amoebic dysentery. We have been accustomed in the past to think of any condition associated with amoebae as being characterized by dysentery. We now know that is not true.

In the diagnosis of amoebiasis there are many important points to bear in mind, particularly in connection with the history. In the first place, at this particular time, we should keep the possibility of amoebic infection constantly in mind; in other words, be "amoeba conscious," if you will permit the term. The symptoms are so varied, the onset so atypical and, in my experience with three cases, so unusual that had not both myself and the patients been amoeba conscious, the true condition might easily have been overlooked.

Two of these patients, a man and his wife, had returned from Chicago where they had been taken ill, the symptoms being dull headache,

slight elevation of temperature, a feeling of exhaustion, abdominal distress consisting of cramps and gaseous distention, and a feeling of heaviness accompanied by tenesmus about the rectum. I want to particularly stress that last point because it probably has as much diagnostic value as any other single symptom. There is heaviness and distress and a desire to evacuate the bowel, but upon repeated attempts nothing is discharged except a watery fluid. Naturally, with such a history the next step was proctoscopic examination, which in the man (his wife was not proctoscoped until some time later) was entirely negative. After the administration of magnesium sulphate numerous sluggish amoebic coli were found but no histolytica. X-ray revealed what I believe to be one of the most important of the diagnostic criteria; the cecum was cone-shaped with what appeared to be an ulcer or a small diverticulum.

With these findings we were justified in assuming that the patient probably had amoeba histolytica that we had not found and that he was entitled to specific treatment which was administered and to which he responded beautifully and was apparently well in about ten days.

The question naturally arises whether, in the presence of such a train of symptoms, even with negative proctoscopic examination as it will be in a certain percentage of cases, we should consider the case one of amoebiasis and treat it accordingly. My own opinion is that such a case should be given the benefit of the doubt. In another case with the same group of symptoms, even to the X-ray picture of the colon, but in which we were also unable to demonstrate amoebae, the results of treatment were again most gratifying. I cannot help but feel that the history is of the utmost importance in the diagnosis of this condition.

Dr. Flexner discussed the question of carriers. It has been demonstrated that something like ten carriers result from one clinical case of amoebiasis which is most significant. In Chicago, for example, from perhaps one or two primary foci of infection there have developed numerous secondary foci. It is my belief that during the coming summer, when susceptibility to enteric conditions is increased by weather and diet, some of these individuals will develop typical amoebiasis after having been carriers for many months or possibly years.

In the tropics it is said that surgeons have to be constantly on guard (in dealing with acute abdominal conditions) against the possibility of an amoebiasis being operated upon as a case of appendicitis, and now it would appear that the same watchfulness is necessary on the part of surgeons in all sections of this country. That this condition has developed into a serious public health problem is evidenced by the fact that the American Medical Association at its coming meeting in Cleveland will devote one entire scientific session to the discussion of this topic.

**H. V. Nolan:** I would merely like to emphasize one or two points that have been brought out in the discussion.

The diagnosis and treatment of the average case of amoebic dysentery really presents very few difficulties. However, in the so-called atypical form such as most of us have seen in the past six or eight months the symptoms have for the most part been referred to the lower right quadrant of the abdomen, which has sometimes made it difficult to differentiate between amoebic dysentery and appendicitis and in some instances has led to operation for appendicitis in cases of amoebiasis or the reverse, not operating when appendicitis really existed. The responsibility for establishing differential diagnosis in such cases rests primarily upon the internist, because the surgeon is rarely called until the patient has been under observation for sometime. During the past two years I have made a routine practice in cases of suspected appendicitis, to have the patient given a barium meal and x-rayed prior to operation, and I would estimate that in about 95 per cent of cases the definite deformity that we have come to associate with sub-acute or chronic appendicitis was found and the diagnosis borne out on the operating table. It is entirely different from the x-ray picture in amoebiasis in which there is a cone-shaped deformity of the cecum with evidence of infiltration of the wall of the cecum. In the hands of a competent roentgenologist, trained in making x-ray observations of appendicitis as well as amoebic dysentery, this is a very important diagnostic aid and it should be employed in every doubtful case.

I have had three cases of what I have called amoebiasis, all in individuals who had been to Chicago. One of these, a woman, stopped at the Auditorium Hotel. From Chicago she went to Southern California and while there developed an acute blood diarrhoea and was treated there. She returned to Louisville and when I saw her she was complaining of definite discomfort in the right lower quadrant of the abdomen. Repeated stool examinations were negative but X-rays showed the typical picture described by the essayist. She was seen by Dr. Frank in consultation and he expressed the opinion that she probably had an amoebic infection. She was given treatment for amoebiasis and has shown definite improvement. The deformity of the colon has almost entirely disappeared.

Another case was a man who also had symptoms referrable to the lower right quadrant of the abdomen for a period of about two months,

with occasional looseness of the bowels but without definite diarrhoea. Amoebae were searched for repeatedly without results. X-ray picture did not show such marked deformity as existed in the first case mentioned; still there was sufficient evidence of infiltration to justify a diagnosis of amoebiasis. This man's appendix had been removed two years previously, prior to which he had been X-rayed, and when the present picture is compared with that made before the operation for appendicitis, there is no question that there has been a definite change in the appearance of the cecum.

The third case was a man who became ill in Miami, Fla., immediately following a honeymoon trip to Cuba. He presented practically the same symptoms as in the second case mentioned and much the same X-ray findings.

All of these cases have shown definite improvement following treatment for amoebic infection. This, together with the fact that the X-ray findings were almost identical with those reported in similar cases throughout the country, leads me to believe that the diagnosis of amoebiasis was probably the correct one.

The chief problem in atypical cases is to establish the diagnosis, and in those cases where repeated stool examinations are negative but in which we find upon X-ray examination definite evidence of an infiltrative lesion, we are probably justified in making a diagnosis of amoebiasis.

**Wm. J. Martin, Jr.:** From a proctoscopic standpoint there are several points that should be stressed in this discussion.

Undoubtedly, much loss of time, money, health and even life has resulted from mistaken diagnosis. Every case of bleeding from the bowel is not piles; every case of abdominal discomfort and colonic dysfunction is not colitis. I believe it was Osler who said that the chief function of the consultant is to do a rectal examination, and this rule still holds good. Within the past two weeks I have seen a patient, who has been treated for "colitis" since last summer, and who had a full-grown carcinoma of the recto-sigmoid within easy reach of the examining finger.

In the presence of bleeding from the bowel the color of the blood and the time of bleeding are both of diagnostic importance. If the blood is dark, it is probably coming from the large intestine or higher up; if it is dark red it is probably from the lower colonic area, if it is bright red it is usually from the anal area. The time of bleeding is also significant. If the blood is intimately mixed with the feces it is probably from the upper colonic area; a stool that is streaked with blood has probably passed over a low, ulcerated lesion in the lower sigmoid or rectum, at which place the stool is usually formed; if it is a bright red blood it is probably from the anal canal. This is usual but not infallible.

The three most common causes of infection of the large bowel are first, amoebic infection; second, so-called chronic ulcerative colitis, which is now believed by many to be of bacterial origin, and third, tuberculosis enteritis, which is the least common of all.

From a proctoscopic standpoint the picture is different in each of these conditions. In amoebic colitis, the bowel presents discrete, punched-out ulcers, with white caps and an accumulation of muco-purulent material, located usually on the folds of the lower bowel with areas of normal mucous membrane between the ulcers. They are much larger than those seen in chronic ulcerative colitis. In chronic ulcerative colitis which is now thought to be of bacterial origin, there is a diffused inflammatory process composed of small miliary ulcers, probably a millimeter or less in diameter, and involving the entire wall of the bowel. It is hard to distinguish where the diseased bowel ends and the healthy bowel begins, because there is a gradual fading out and the whole circumstance of the bowel is involved. The wall of the bowel is thickened and oedematous and this gives us the typical roentgenographic picture of a fore-shortened, narrow, non-haustrated bowel. In tuberculous enteritis you find large shaggy ulcers, which usually run lineally in the bowel and are surrounded by fairly normal mucous membrane. They do not have the typical punched-out appearance of amoebic ulcers and are not diffused as in chronic ulcerative colitis.

A great deal of stress has been laid on the x-ray diagnosis of amoebiasis, but in the opinion of many competent radiologists that this condition does not present a typical X-ray picture. One investigator in St. Paul, recently reported several cases in which a more or less cone-shaped deformity of the cecum was noted, this was the first report I had seen along that line. Chronic ulcerative colitis, however, does present a typical picture, and in tuberculous infection, the majority of which are on the right side, we get a typical picture of a funnel shaped deformity extending from the ileo-cecal valve upward towards the hepatic flexure, and usually involving the ileo-cecal valve and terminal ileum.

The treatment of these conditions is important. The tendency to recurrence of amoebic infection may be due to insufficient or improper treatment, but I am inclined to believe that in most instances so-called recurrences are due to a reinfection rather than a return of the original condition, especially where the individual remains in the same locality. The majority of cases upon leaving the tropics after having re-

ceived anything like adequate treatment usually have no further trouble.

The clinical picture also varies in each of these three types of bowel dysfunction. In chronic ulcerative colitis there are intermittent attacks of severe diarrhea, continuing day and night even when the patient is at rest, with tenesmus and frequent emissions of blood, pus and water rather than fecal matter, although these individuals call them bowel movements and will tell you that they have as many as thirty or forty in twenty-four hours. Some man has given these rectal emissions the name "intestinal sputum." In amoebic dysentery there is usually an alternating diarrhea and constipation, except in acute cases, and emissions are not as frequent during the night when the patient is at rest as in the other type. In chronic ulcerative colitis there is more bleeding than in the amoebic type. In tuberculosis enteritis there is usually a progressive diarrhea alternating with periods of constipation, and little or no bleeding. This is a very important diagnostic point.

After all, in the midst of the furore caused by the foci of amoebic infection recently discovered in Chicago, we must not lose sight of the fact that we still have such conditions as polyps, diverticulitis preceded by diverticulosis tubo-ovarian disease, appendicitis and gallbladder disease, and in becoming "amoeba conscious" we must not become too much so, to the possible detriment of our patient with more common conditions.

**A. B. Loveman:** Dr. Flexner mentioned the interesting possibility that, while cutaneous manifestations of amoebiasis are more or less dependent upon surgical complications, in that they become manifest in operations upon the gallbladder or appendix, we may occasionally see such ulcers about the rectum or on the skin with apparently no visceral manifestations. These ulcerations are quite distinctive in that they develop rapidly, are exceptionally painful, oval, or serpiginous in shape undetermined, and are usually surrounded by a marked inflammatory halo.

Diagnosis of amoebiasis can be made on the cutaneous manifestations alone and we should be on the lookout for them.

**Virgil E. Simpson:** It has been a part of my professional experience to have seen eight cases of amoebiasis since September, 1933.

Considered as a group, these cases presented several interesting features. Proctoscopic studies were made of all of them. In only one case were typical ulcers seen, such as described in the textbooks. In that case there were a number of ulcers within proctoscopic view and a diagnosis would have been warranted from that study alone. Specimens obtained from these ulcerated areas showed motile amoebia. In one case ulcers that were labeled as suspiciously like amoebic ulcers were seen. Smears from these areas likewise showed motile amoeba. In two cases multiple punctate ulcerations were seen proctoscopically, with reddened tissue intervening, and which showed streptococci on culture. These were thought at the time of study to be of the nature as described by Bargen. In one of these cases, repeated laboratory study made in two laboratories failed to show any amoeba. Streptococcic were found up to the day of death. The other case in which streptococci were found was the first of the group seen and at the time amoebiasis was not suspected, and the diagnosis at the time of death was Ulcerative Colitis. A reclassification of this case was considered warranted in the light of subsequent events. This patient had been a visitor in Chicago and had been a guest at one of the hotels in question.

Diarrhea could not be said to have been characteristic of this group. It was entirely absent in three of the cases and was not an outstanding feature in one other. In one fatal case the patient not only had no diarrhea, but was constipated throughout the illness until within twenty-four hours before death. In one other case no diarrhea was observed until after surgical operation.

Two cases were extremely septic from the beginning. The temperature ranged high, pulse was rapid; they gave every evidence of being extremely ill and went on rather rapidly to exhaustion and death. These were the cases in which streptococci were found. In two cases amoebiasis was not suspected and the organisms found during the routine stool examination. One of these was seen on account of a multiple arthritis, the other because of under weight and secondary anemia.

Two of the group presented a picture of acute pathology in the abdomen and were subjected to laparotomy with a pre-operative diagnosis of acute appendicitis in both. One of these I studied from its onset and there is adequate reason for chagrin from a diagnostic standpoint. To see such a case with the clinical features of appendicitis,—acute onset, tenderness over McBurney's, temperature of 103° F., white cell count 14,000, with subsidence under expected plan of management, and then to come to the operating table and see a practically normal appendix turned out, not even adherent, and subsequently to die after a stormy post operative course with a clinical diagnosis of amoebiasis after the operation, but negative stools until the day before death, and finally to see multiple extensive ulcerations of the colon post mortem, presents a picture that offers some, though not adequate difficulties to offset the regret of diagnostic failure.

The blood studies in this group were not illuminative. The highest white cell count found occurred in one of the cases diagnosed clinical-

ly as streptococcic ulcerative colitis. The white cell count in this case was 29,000. In two cases the white cell count did not exceed 6,000. The eosinophile count did not exceed 4 per cent in any case in the entire group; in two it was as low as 1 per cent. Contrary to the experience of some clinicians, culture study has been helpful in our series. In two cases it constituted the means of diagnosis, after several failures with fresh specimen study.

Three cases out of the eight had not been in Chicago, evidencing the accuracy of previous statements that amoebiasis was a matter of rather widespread infestation prior to the Chicago outbreak. I am not prepared to accept Craig's estimate of 8-10 per cent of the population as being so infested but do believe that perhaps as much as 3 per cent of the population generally are either sufferers from a chronic amoebiasis or are carriers. The reference to carriers leads to another interesting feature of the epidemic. The first explanation offered by the Chicago Board of Health was that the outbreak was a sequence to infestation through food handlers who themselves were carriers. I never felt satisfied with this explanation and have not been in sympathy with the movement on the part of public health officials to have all food handlers of hotels and railway trains examined for amoeba. The article recently published in the Journal of the A. M. A. therefore affords me considerable satisfaction in that it is now known that the epidemic was the result of faulty plumbing and was not due to food-handlers.

In the matter of therapy it may be of interest for you to know that Chiniofon, one of the newer preparations employed in the treatment of amoeba, has been admitted to the U. S. P. No. 11; likewise Carbarsone has been admitted. I think that it is well to have these drugs, together with Emetine, available for use, because they each carry a potentiality for harm to the patient in consequence of their own toxic effects. Chiniofon, Carbarsone and Emetine are of entirely separate origin and therefore they can be alternated in the course of treatment without the risk of damage to the patient's tissues as would have been incurred were we obliged to confine our therapeutic activities to one drug alone.

**Thomas F. Duhigg:** My duties with the United States Navy have taken me into regions where amoebiasis is not uncommon. "Familiarity begets contempt," and when we become more familiar with amoebiasis it inspires less terror. I have been surprised at the furore created about the seven hundred, more or less, cases of amoebic dysentery, scattered through some 200 cities, supposed to have originated in Chicago from a bursted sewer pipe. One of the essayists referred to the dangers of life in China. At any rate there would be little or no danger of a sewer pipe bursting in China.

Given a case of amoebic dysentery, while you are making laboratory examination and x-ray studies, apply also your clinical sense. Where you find abdominal pain, accompanied by irregular diarrhoea, gaseous distention, anorexia, usually without vomiting, and the patient not very sick, give one grain of emetin hypodermatically once a day—not a third of a grain three times a day, or a half grain twice a day, but a full grain once a day. By the time the laboratory diagnosis has been figured out, your patient may be well. Emetin is a specific for amoebic dysentery as quinine is in malaria.

I want to congratulate all of the essayists, but particularly the surgeon. I think he handled his subject in a very cagy manner. He did not introduce figures to show that the mortality is reduced by surgery—there are no figures to prove it. About as far as a surgeon should go in a case of acute amoebic dysentery is to find out what is the matter, and then turn the case over to the internist. Undoubtedly, acute hepatitis, and sometimes abscess of the liver occurs, but the first treatment should be with emetin. Aspirate if you like, but major surgery should be reserved for some of the complications of chronic cases. Complications occur in less than 2 per cent of cases treated promptly.

Ten years ago, when in Shanghai, I had the pleasure of knowing Doctor Dunn and something of his method in the treatment of amoebic dysentery. In that region, we did not worry much about microscopic slides, or warm stools beyond a careful inspection of its gross appearance. We put the patient on treatment promptly—one grain of emetin hypodermatically daily and kept it up for 8 to 12 days. Beyond that limit a neuritis may develop, but almost any one can stand it for 8 days, and by that time most of them will be well on the way to recovery.

I served aboard four ships in the Asiatic Fleet, with about 150 to 200 men aboard each ship. I was in close contact with the men and knew their physical condition every day over periods of six to eight months. Also I had information concerning many other people ashore. I never saw a patient that did not get well under this treatment. In cases of so-called recurrence, often what really takes place is reinfection.

In China, instead of laying sewer pipes, they put the organic matter on the soil. They recognize the danger of pollution of streams, but they consider it a lesser evil than robbing the soil of what causes the stream pollution. All of the night soil of Canton, a city of more than a million people, is marketed at a profit, to be used as fertilizer. Undoubtedly a large percentage of the Chinese have amoebic infection, yet I would say that for those following the laws of

hygiene, life is about as safe in China as it is here.

There are three reasons why the Chinese resist disease. First because they are well fed and well nourished. Second they aim never to drink any except boiled water. They invented tea-drinking because tea makes boiled water palatable. And third because their farming is so excellent.

When I was in Canton, a soil survey was being made to determine why hookworm infection is not a serious question there. (I believe the doctor directing the survey was from Johns Hopkins.)

The Chinese make every effort to return all organic matter to the soil. The rain or irrigation carries it into the soil. As the gound water level descends, it draws air in after it. The heat, organic matter, and irrigation alternating with longer periods of aeration, make the soil an ideal place for the reduction of waste products to simpler compounds. The Chinese farm most intensively the low rich ground. It is first drained to reduce the ground water level well below the surface. Hookworm thrives only on a soggy, foul land that is habitually wet. When drained, stirred, and ventilated, the soil bacteria break down the complex molecules of organic matter which become food for plants when it reaches the stage of nitrates. Even the amoeba of dysentery and the hookworm, in well farmed soil, are disintegrated by the nitrifying bacteria, and added to the material destined to become food for plants—onions, cabbage or what have you. Practically a high percentage of Chinese have a little amoebic infection, and likewise a little hookworm infection, but they are so mild they produce no symptoms.

**Frank Stites:** In regard to the treatment of amoebiasis, we should remember that in the acute stages emetine is our sheet anchor, but when the acute symptoms have subsided and the motile amoebae have disappeared from the stools we should not stop there. Some of the newer forms of treatment are of great value in dealing with the chronic stage and in preventing the development of carriers. In the Orient amoebic patients are very apt to become carriers because when the acute symptoms have subsided they are usually dismissed without further treatment.

While I am inclined to agree with Dr. Hanes that there is only one type of amoeba, still it is difficult to explain the variation in symptoms in these cases. In the Orient practically all of them have acute diarrhoea, with from 12 to 40 stools in twenty-four hours consisting of bloody mucus and pus. In this country cases have been reported in which there were no dysenteric symptoms whatever and yet upon coming to autopsy the bowel was found to be ulcerated from the anus to the ileo-cecal valve. This was true in two cases that I have seen. It is impossible to explain this variation in symptoms, unless in some instances the amoebae are more attenuated than in others, or they vary in activity in different climates.

In conclusion, I would again emphasize the fact that treatment of a case of amoebiasis should not stop upon disappearance of the motile amoebae from the stools, but should be continued long enough to be sure that the individual will not become a carrier in subsequent years.

**H. H. Hagan,** (in closing): It seems to me that the difficulty from a surgical standpoint has been largely caused by not recognizing one condition, known as acute localized oedematous colitis. We encounter this condition in very acute cases. It may cause constriction of the lumen and oedema of the bowel and make a very favorable gut to suture. I believe most of the unfortunate surgical cases reported in the literature, growing out of the recent epidemic originating in Chicago, have been cases of this type, involving particularly the cecum but also other sections of the bowel.

One of the charts shown demonstrates graphically the progress that has been made in dealing with amoebiasis, and illustrates the point brought out by Dr. Duhigg that recognition of acute hepatitis with appropriate treatment will usually prevent liver abscess.

It shows the rapid fall in the incidence of liver abscess, and in the mortality of liver abscess when treated by aspiration and emetin or other appropriate drugs.

**Morris Flexner,** (in closing): I wish to emphasize Dr. Dowden's remarks concerning the importance of the history in making diagnosis of amoebiasis. Frequently individuals with amoebic infection will give a history of feeling perfectly well, and upon sitting down to eat, toward the end of the meal they suddenly experience a desire to go to stool and then proceed to have a copious action. I have obtained that history repeatedly; in fact, it made the diagnosis in one case in which there was no other clue to the nature of the trouble.

I was interested in a recent account of an epidemic of amoebic dysentery among the snakes in the Philadelphia Zoo. Several of them came to autopsy and typical amoebic abscesses and definite amoebic ulcers in the intestinal tract were demonstrated.

# TRAUMATIC SURGERY OF THE FACIAL STRUCTURES*

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Louisville.

I want to assure you that I appreciate your kind invitation to appear before this organization. Recent developments in medicine and dentistry bespeak closer cooperation between physician and dentist, and this is especially true in surgical procedures on the face in which the skeletal structures are involved. Surgical operations on the face are most exacting from the standpoint of function and esthetics. Due to exposure of the face, sears and deformities must be minimized if the operator is to escape severe criticism or worse still, damage suits which are extremely annoying and sometimes expensive.

I shall confine this presentation to a discussion of a few cases which arise from trauma and subsequent infection in which a careful, minute knowledge of anatomy and its functions is an important factor and in which the co-operation of physician and dentist is most essential. Traumatic injuries about the face usually involve both the soft and bony tissues which support the teeth. An accurate knowledge of position of the teeth is essential for the best end results. In such cases, if the patient is not in shock, there should be immediate repair of the soft tissues after the wound has been thoroughly cleansed with soap and water, all foreign material removed and wound painted with metaphin or mercurochrome, or a weak solution of iodine. After which all irregular, jagged edges should be cut away and the edges of the wound accurately approximated and closed, either with skin clips or subcutaneous sutures. For skin sutures I prefer horse hair or dermal material.

The mucous membrane surface of wounds which penetrate the mouth should receive the same care as the skin surface, the same is true of wounds of the tongue, accurate approximation and suturing with silk or dermal suture material. The importance of this cannot be over estimated from the esthetic effect. Failure to accurately close the wound on the mucous membrane surface often causes a sunken place in the cheek or a thin drooping or everted effect of the lip. Where the gum tissue is lacerated, the lips or cheeks may become attached to the gum tissue if not properly cared for. If the lips or cheeks should become attached to gums, a plastic operation may be done to restore normal appearance and function to the lips and cheeks. If the mucous membrane wound should be in the cheek or floor of mouth, care should be observed not to tie off with our sutures Stenson's duct or duct leading for the sublingual or submaxillary glands.

Fortunately, in most cases, the soft tissues of the face are sufficiently loose to enable the operator to remove these jagged edges and approximate the wound accurately without tension on the sutures. If the wound is of such a nature that proper approximation produces tension, the superficial tissues on one or both sides of the wound should be loosened from their attachments so that tension will be relieved. Small strips of mole skin adhesive may be used to relieve tension on the suture line or stay suture of heavy silk or dermal, using small lead plates or buttons to prevent sutures from cutting through the tissues when swelling occurs. I have used this method in a number of cases with gratifying results, especially to the patients. Scar tissue on the face is objectionable regardless of how small it may be.

In cases of gun shot wounds where the soft tissue destruction is great, it is useless to attempt immediate approximation. Best results can be had by properly controlling hemorrhage and clipping away ragged, dead fragments of the tissue, then packing the wound so as to retain normal position of the tissues in so far as possible until granulation takes place, after which a graft can be used to cover the deformity very effectively. Such a graft should be taken with sufficient thickness of fascia to restore the normal contour of the parts destroyed. This, however, should not be attempted until tissues have returned to normal in so far as the blood supply is concerned. Keloidal tendencies in the skin of patients preclude good cosmetic results in any surgical procedures in the face and neck.

Should infection develop in closed wounds, enough sutures should be removed at once to secure adequate drainage and to prevent infection burrowing under the plains of fascia. If drainage is not adequate to relieve the pressure, serious results may occur very quickly.

Those wounds which involve the bony structures and the teeth are the ones which cause loss of function, in part or completely, as well as great deformity and inconvenience to the patient, especially fractures of the bones of the face, the number of which is increasingly noted in this machine age in which we live. The automobile is primarily responsible for many of these bad fractures or crushing blows to the face. Fractures of the bones of the face involve the teeth and their alignment in practically ever instance. Predisposing causes of such fractures are impacted teeth in the body of the bone, cysts abscesses

*Read before the Cumberland Valley Medical Society, Harlan December, 1933.

and tumors which materially weaken the bone. Impacted teeth are often responsible for fractures at the angle of the mandible; many such fractures would not have occurred if the normal strength of the jaw was present. I am purposely omitting consideration of many of those cases in which fracture of the skull accompanies injuries of the bones of the face.

Immediate care of bony structure should consist of the nearest possible approximation without too much manipulation of the fractured portions of the bones. No teeth should be extracted in these cases unless absolutely necessary, especially if Vincents infection is present. Sufficient time should then be allowed for the patient to recover from shock, loss of blood and the general excitement that usually prevails following such injuries. During this time the one best method of maintaining fractured segments in position is the application of a strip of rubber tissue around the chin and over the top of the head, especially if there is a tendency of the injured parts to sag. With the one exception of those cases where the maxilla is driven downward and backward, this rubber bandage is applicable. This type of case is nearly always complicated by fracture of the skull. Ordinary rubber dam used by dentists works nicely in these cases where the fractured segments have a tendency to drop. The constant pull of the rubber is much more effective than the use of Barton's or other types of bandages commonly used. It should not be applied with too much tension at first; tension can be increased as needed.

The reduction and fixation of fractures of the bones of the face have been brought to a very exact procedure by Blair-Ivy, Kazanjian and others who have handled many of these cases. The Blair-Ivy method of wiring the teeth together is sufficient in most cases where the patient has approximating teeth. The circumferential wiring in cases where all or part of the teeth have been removed is much to be preferred over open operation where silver wire or kangaroo tendon has been placed through the body of the mandible. Most dentists who have had surgical training can make use of some form of splint or wiring or a combination of the two and accurately approximate the factured segments of both the mandible and maxilla without external incision and open reduction of the fracture. In cases where the maxilla alone is fractured and patient has approximating teeth in both jaws, a very simple procedure in the reduction and fixation is by wiring the upper and lower teeth together, then take an accurate impression of the chin, (cover with vaseline to prevent sticking of plaster) using a plaster bowl for an impression tray, swage a thin metal splint, which accurately fits the chin, attach this to a skull cap made of heavy material by means of strips and small buckles. These can be adjusted easily and the upper jaw forced into accurate position by pressure being applied to the chin and a skull cap which should be accurately fitted to the head. The factory made splints do not fit accurately enough to be very effective.

Fractures through the angle of the mandible posterior to the last remaining teeth may require a combination of splint and wiring. Or if neglected and the ramus allowed to displace forward and upward under the malar bone of maxilla due to the pull of the muscles attached to it, a plaster cap fitted close to the head, with small projection of coat hanger wire imbedded in the plaster extending down to a level with the angle of the jaw, then making a small incision at the angle of the jaw, being careful not to enter parotid gland, then drilling a hole through the misplaced angle of ramus, attaching small piece of wire to it and making tension on this wire when attached to the one extending from the skull cap. This is beautifully illustrated in Mead's new book, which is an exact reproduction of the technic used by Blair and Ivy some years ago. It is only applicable in those instances where ramus cannot be held in position otherwise and has proven an effective means in isolated cases of this type.

Fractures of the zygomatic arch and the inferior border of the orbit can often be put into normal position by grasping these with a heavy towel clip or the single tooth tongue forceps directly through the overlying soft tissue, then gently manipulate the bone in place. Punctures of the skin and soft tissues with such instruments are preferable to open incisions. Care should be observed in cases of fracture of the infra-orbital border that the tear duct is not occluded when the fragments are placed in position.

Fractures that involve the malar bone can be replaced in normal position in a similar manner to that of the zygoma and the infra-orbital border. Sometimes it is necessary to enlarge the normal intra-nasal opening into maxillary sinus, then using a blunt instrument, force the malar bone outward into position. Also a very effective way is to make a small stab through the soft tissue under the lip, drill a hole through the outer plate of the bone and pass through it a curved instrument, something like a shoe buttoner, and then by exerting force on this instrument, the malar bone can be pulled outward into its normal position, where it will remain without fixation.

In all cases of fracture of the maxilla, care should be given in so far as possible to

eliminate blood clots in the maxillary and other accessory sinuses in order that subsequent infection of same may be avoided. The position of the head so as to take advantage of gravity drainage helps. The use of argyrol or neosilvol drops in the naries two or three times each day as a sterilizing agent is advisable.

Fractures of the nose in connection with fracture of the maxilla are usually of the crushing type. Fairly hard rubber tubes may be inserted into the nose after they have been properly shaped to maintain as nearly as possible the original contour of the frame work of the nose. Openings may be cut into these tubes so as to facilitate irrigation and breathing through the nose.

Practically all authorities tell us that these cases should have tetanus antitoxin administered as early as possible after injury. However, a word of caution in regard to the indiscriminate use of tetanus antitoxin is advisable. There are so many individuals who have been immunized for various diseases that I think it is always advisable to use two or three minims in the skin and watch for local reaction before injecting the full dose. Fatal reactions have taken place a sufficient number of times to warrant cure in the administration of tetanus antitoxin.

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**Harmone of Posterior Hypophysis in Pregnancy.**—Rupp and Bickenbach report the reaction of the pregnant organism under the influence of the hormone of the posterior hypophysis. These investigations were made in view of the new theory of the hypophyseal origin of eclampsia. They found that the manner of water elimination under the influence of the hormone of the posterior hypophysis is not changed by the existence of a pregnancy. Observation on the chloride elimination revealed that a sudden action of the hormone of the posterior hypophysis may lead during pregnancy to a temporary increase in the percental quantities of chloride in the urine, but that in case of a continuous water retention under the influence of the hormone of the posterior hypophysis there develops also a chloride retention. The action of the hormone of the posterior hypophysis seems to be masked by the change that takes place in the chloride metabolism during pregnancy. There is no contradiction between the chloride during pregnancy and the assumption of an excessive hormone action of the posterior hypophysis in pregnant women.

## DENTISTRY, YESTERDAY, TODAY AND ITS RELATION TO MODERN MEDICINE*

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Covington.

The purpose of this paper is not a technical discussion but rather an endeavor for better understanding between physicians and dentists to the end that our patients may be better served.

### Dentistry of Yesterday

In a rather sketchy manner this paper will briefly review the development of dentistry that it may be appreciated the more fully the tremendous strides made in and by the dental profession in recent years. This review must of necessity touch upon some phases not altogether complimentary to the profession but such notations are essential if a true picture of the progress of dentistry is to be presented.

Undoubtedly in the initial evolutionary stage dentistry must be traced to and with the earliest practice of medicine and surgery.

On apparently authentic documentary evidence diseases of teeth and gums were recognized and treated in Egypt prior to 3700 B. C. though no Egyptologist has ever found even in the mummies of kings and persons of rank any type of dental restoration. This is hard to explain when it is recalled that at this time the Phoenicians, who were neighbors, were related in bonds of commerce, and owed allegiance to the Egyptian rulers, were versed in dental prothesis.

In the earliest Egyptian records it was advised that teeth should not be extracted unless they were so diseased as to be loosened and then only with forceps made of lead. Which would lead one to the conclusion that pyorrhea is not a modern disease.

Hippocrates, about 460 B. C. was the first, as far as we have records, to know and describe the period of the eruption of the teeth as well as their function.

From tombs we have specimens, of some rather ingenious devices made of gold bands or wire holding in place artificial teeth carved from ivory, bone or wood dating back centuries before the Christian era. Such evidence definitely proves that dentistry was practiced by the Etruscans, Greeks and Romans.

The earliest of filling teeth dates back to the fifth or sixth century; about which time it was discovered that teeth had nerves.

About the tenth to the eleventh century steel instruments were introduced for the ex-

*Read before the Campbell-Kenton Medical Society.

traction of teeth. These were developed along the type of the turn key.

The replanting or transplanting of teeth was first practiced at approximately this time.

During the crusades medical practice sunk to a very low estate and was confined to very narrow limits. Whatever dentistry was practiced was left to the hands of "farriers and barbers."

As early as 1308 the barbers of London were incorporated into one guild with the surgeons, and the English name of surgeon barber for several hundred years embraced the practitioners of all special branches of surgery. The title of "Doctor" was invented in the twelfth century and indicated a learned man in any science. William Gordenia at Asti, Italy in 1329 was the first man to receive the title of Doctor of Medicine.

On up through the sixteenth and seventeenth centuries surgery was not looked upon as a very exalted calling.

Minor surgery everywhere in Europe was relegated to the care of the barbers, dental surgery being embraced under this head. There were no dentists then as specialists, except in so far as the barbers cared for or removed teeth.

In Paris the surgeons appealed to the Faculty of Medicine for redress against the degraded condition of their profession being so closely connected with the barbers, and they were granted permission to enjoy certain privileges over the barbers upon the payment of an annual tribute of sixteen sous. This was toward the close of the fifteenth century.

A little later, 1505, the barbers and physicians of Paris entered into a compact by which, for certain considerations the barbers were admitted as members of the medical faculty. The surgeons galled under the domineering conduct of the physicians for years. In spite of constant trouble with the physicians, the surgeons enjoyed an independent existence. In 1596 they promulgated a rule against the barbers compelling them to call a surgeon in all cases of importance and to describe the field of their operations to trivial cases. Under this rule the barbers probably continued to be dentists.

The title "Surgeon Dentist" was first given to several men in France in 1622.

France in 1700 was the first country to recognize the importance of dentistry as a distinct profession, by requiring prospective practitioners to submit to an examination.

As in France, so in England, the barber surgeon was the earlier representative of the dental practitioners. It was not until 1745 that the barbers and surgeons of England were entirely divorced.

In this country the Pilgrim fathers brought into the colony from London some physicians, an apothecary and three barber surgeons.

There are records of surgeon dentists in the colonies as early as 1735. Throughout the eighteenth century those of note who practiced dentistry in the American colonies were either persons who had learned something of dental procedure in France or England or Colonists, apt mechanically as instrument makers, ivory turners, silver or goldsmiths, who by chance of circumstance were permitted to acquire something of a knowledge of dentistry from these Europeans. Paul Revere was one of this last class named.

Those men in this country who, early in the nineteenth century directed the course of the development of dental surgery as a profession separate and apart from medicine were for the most part men of medical training practicing dentistry. They held to the idea that dentistry, if taught as one of the phases of medical practice, would lead to many merely dabbling at dentistry and but few attaining proficiency therein. They may have been right and maybe wrong.

As an outgrowth of this desire to create of dentistry a separate profession from medicine and surgery there was established in Baltimore, Maryland in 1840 the first dental college in the world. Shortly after in 1845 Cincinnati a second such college was organized. There was also at this time published the first dental journal, The American Journal of Dental Science. The first Dental Society was organized in 1837.

These three agencies, dental colleges, dental journals and dental societies were factors that developed dentistry in this country so rapidly that shortly the American dentist was considered superior to the dentists in any other part of the world. Elsewhere those who practiced dentistry for the most part regarded their knowledge—their technique as something to be guarded lest it be revealed to their competitors. In America the above mentioned three agencies promoted an exchange of ideas with the result that American dentistry in the nineteenth century outstripped that of the old world in its development causing Europeans to come to America to finish in dentistry even as our physicians formerly went to Europe.

And yet what was the actual condition of the dental profession in America. It has been previously recalled that the forerunner of the dentist of today was often the blacksmith, the barber and the silver or goldsmith who usually served a sort of apprenticeship under one who practiced dentistry. The most important requirement of the apprentice being mechanical ability. This condition prevailed up to recent years.

The early part of this century found conditions such that a man to practice, need not have more than an eighth grade education; he need not be a graduate of a dental college. In fact in 1903 less than sixty per cent of those practicing dentistry in the United States were dental graduates.

At that time in most parts of our country a person could serve a period of training with an established dentist, or take a course of study in a dental institution and appearing before a dental examining board, and passing the examination, (for the most part in the mechanics of dentistry) he was permitted to practice.

Such conditions not only tended but actually did make of dentistry a profession of refined mechanics, (and much of it not so refined). Such conditions absolutely divorced dentistry from medicine, divorced it in a large measure from a consideration of the general health of the patient.

This paper would not for one moment be guilty of implying that during the period just discussed that there were not brilliant and learned individuals in the dental ranks. Just as in medicine, dentistry has had its brilliant members and its dubs. But the conditions above mentioned caused those brilliant members of the profession to be in such a minority as to fail to leaven the whole body of the profession.

The great cry of American dentistry during the later eighteenth and early nineteenth centuries was conservation. The ingenuity and mechanical ability of the American dentist enabled him to, with comfort to the patient, preserve all manner and sorts of teeth but with what result and at what a price.

On the 28th of July 1900 the self satisfaction and complacency of the American dentist was rudely disturbed by the arraignment of Dr. William Hunter, a noted surgeon of London. The statements of Dr. Hunter were nothing short of heresy. And yet in the ensuing years his condemnation of the then accepted practice of dentistry has been more than vindicated and justified.

The dynamite exploded by Dr. Hunter may well be said to have wrecked the old concepts of dentistry and its functions. Up to this time, and it might be said up to the present time, dental services were based upon a play to the mechanical restoration of function, and upon a play to pride of appearance without regard to health; and it is to be regretted that many still cling to the old concept. Valuable as may be the teeth their value cannot be compared to the general health of the patient. As between the sacrifice of teeth or health there can be only one rational choice.

Dr. Hunter was roundly condemned by American dentists but he was a benefactor not only of humanity but of dentistry.

It is to be regretted that men claiming to be scientific cannot listen to statements that assail their cherished beliefs without becoming so enraged that they lose their power of cool deliberation and judgment. How often we note that the more untenable ones position or belief the more tenaciously they cling to such belief, closing their eyes to logic and fact.

And with such a display of verbal fireworks it may be said dentistry of yesterday came to an end.

And what of the dentistry of today?

What are the requirements of present day practice?

If one is to measure up to the challenge of modern dentistry there is no profession that demands so much. One must be possessed of much of the knowledge of the M. D.; one must be an artist handling color and sculptoring in the ceramic end of dental work; one must understand the laws of physics and engineering to successfully plan restorations; one must be a mechanic of no mean ability to execute the restoration planned; and last must possess the diplomacy and argumentative ability of a lawyer together with a patience and forbearance of a genuine divine. The requirement of all the learned professions rolled into one.

Yesterday the apparent remuneration from the practice of dentistry tempted many a tradesman or mechanic to enter the profession and the academic requirements being so low, they were able to qualify. Today college work is requisite before one may enter dental college. College work as a requirement does not of necessity mean that all who enter the profession will be mentally well equipped. College work merely exposes one to education. It does not always take, but the probability of much higher mental capacity is vastly increased.

As a result of the researches of members of both the medical and dental professions today it is recognized by an ever increasing number of dentists that teeth that are devital cannot remain sterile for a period of over six months. Most devitalized teeth do not remain sterile for even that long a period. Today it is known that a tooth need not be devital to be infected. Today we know that the systemic involvement from apparently slight pyorrhetic lesions may be as profound as from apical foci of infection. As Rosenow of Mayo Clinic speaking of dental focal infection has said "The systemic effects seem to be all out of proportion to the area involved."

Because of the findings of research workers there was and to some extent still exists a

proneness to needless loss of teeth. It is to be regretted that it has been known to happen that some physicians failing to discover the causative factor in some obscure or puzzling case and for want of something better to advise have ordered the wholesale extraction of teeth. Such procedure is to be condemned and it has caused much friction and ill will between physicians and dentists.

There must be but one aim before both professions—health building—health preservation. To serve the patient to the greatest extent there must be co-operation—understanding between the professions. There has been too much of misunderstanding.

It is unquestionably true that for many years the medical profession, as a whole, and not without justification. looked upon dentists, or the dental profession, very much in the same way that, a hundred years or more previously, the physician viewed the surgeon, and the surgeon the barber surgeon.

Relations between medical men and dentists from the broad professional standpoint have always remained in an undefined and unsettled condition. The question whether dentistry is a profession by itself or a department or a specialty of the medical profession has frequently been discussed by individuals, by societies and by journals devoted exclusively to dentistry or medicine. Long controversies, sometimes satirical, sometimes humorous, have been indulged in on both sides of the proposition. There has never been a court of competent jurisdiction to render final decision in the case and so dentistry has grown up with its own schools, its own literature into an independent branch of the healing art.

I look for the day to be not far distant for the dental diagnostician to take his place in the ordered scheme—a liaison individual not concerned with the mechanics of dentistry but only the seeking after knowledge as to deficiencies and the resulting disease.

Just as the concept of disease has shifted from the idea of being "a state of the body plus some invading organism;" to the concept of being "the body minus some essential element, which deficiency makes the body susceptible to the onslaught of some pathogenic organism;" so the concept of dental health is changing.

Where dental caries or pyorrhea is present we have an individual deficient in some particular. The old statement "A clean tooth never decays" is bunk. Another idea that a clean mouth prevents pyorrhea is fallacious. We find extensive caries and pyorrhea in mouths receiving scrupulous care. We find the filthiest mouths absolutely free from either caries or pyorrhea. The essayist would not like to be quoted as saying that mouth hygiene is unessential, but it is not the deciding factor. Dental caries and pyorrhea are not strictly speaking mouth diseases but rather mouth symptoms of body deficiencies or systemic conditions.

Ten years or more ago the essayist made such statement before a dental group and was treated as though he had uttered an heresy. Last spring such statement was met with "We would not undertake to disprove the truth of that statement." But we have not as yet arrived at the point of possessing definite knowledge as to just what physical conditions do produce these mouth conditions — the mouth symptoms that are at present termed mouth diseases.

And in attaining definite scientific knowledge as to the general conditions that cause or contribute in producing these mouth symptoms is the field of endeavor wherein the physician and dentist—co-operating—may render great service to society and themselves. It is a task for both medicine and dentistry, for one cannot have poor teeth and good health.

Dentistry of yesterday was restorative, a repair job: dentistry of tomorrow will be preventive. The day is dawning when it will be a reproach to a dentist that some young patient for whom he has cared from infancy up, should arrive at young manhood or woman hood with a lot of restorations in his or her mouth.

It would seem self evident that in the past the lack of respect for dentistry on the part of medicine was not so much directed at dentistry itself as the lack of training on the part of a large percentage of dentists. May the day soon come, and it is coming, when the large percentage of dentists recognize their responsibilities and fit themselves to adequately discharge the obligations of the practice of dentistry. When that day does arrive dentistry will, as it has a right to be, be acclaimed by both medicine and the laity as a learned profession. God speed the day.

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**Cutaneous Epithelium in Immunity Response.**—Dienes points out that the epithelium of the skin is probably sensitized in allergic (contact) dermatitis and certain cases of drug idiosyncrasy. The hypersensitiveness of the epithelium develops by contact with the injurious agent in the same manner as the usual forms of hypersensitiveness. The tuberculin type of skin reactions presents many characteristics that suggest the direct participation of the cutaneous epithelium in the reaction. The characteristic necrosis in the reaction is often limited to the epithelium and a thin layer of connective tissue below it.

# CRANIOPHARYNGIOMAS*

FRANKLIN JELSMA, M. D.
Louisville.

The term craniopharyngioma applies to those congenital tumors that arise from epithelial rests of the craniopharyngeal duct. They are all epithelial in origin, yet the gross and histologieal eharaeteristies vary greatly. This variation has given rise to many synonymous terms, such as suprasellar eyst, Rathke's pouch eyst, adamantinoma, ameloblastoma, epithelial tumor and many others, all of whieh are descriptive of the gross or mieroscopie pieture, yet misleading as to the true nature of the lesion.

Should they originate from cells near the distal end of the duct, they may develop within the sella and present symptoms associated primarily with pituitary insuffieiency. They may extend through the diaphragm sellae or originate without the sella and cause additional neighborhood symptoms such as, adiposity, disturbances in water balanee and temperature regulation, somnolenee, cardiac irregularities and emotional ehanges. A forward extension of the lesion oftentimes produees ehiasmal pressure with visual ehanges, while the extension upward eompresses the third ventriele. Should the ventricle be blocked by the tumor, hydrocephalus and the usual symptoms of inereased intraeranial pressure, headache, nausea, vomiting and mental deterioration—will follow. It is for these acute symptoms, and for visual disturbanees, that the patient seeks relief. This happens most often before the middle of the second deeade.

In many eases, the anterior pituitary deficiency is plainly notieeable in early ehildhood. The under development is quite evident. If of the Lorain type, the child will be frail and slender, with thin, hairless skin, in mild eontrast to the Froelieh type, whieh is moderately plump. At this time, if a differential investigation is made, and the lesion verified, operation will ward of the disastrous compression effects upon hypophysis, hypothalamus and the visual mechanism. The x-ray offers one of the best ways of verifying the tumor as 80 per cent of the eases show a suprasellar ealeifieation.

The case whieh I wish to present tonight is a typical example of the effeets of prolonged compression by a eraniopharyngioma. The patient is a dwarf. Preoperatively, the left eye was blind. Vision in the right eye was rapidly failing.

## CASE REPORT

D. E., aged 17 years, female, white, craniopharyngioma; during infaney and early ehildhood, the patient had been well and mentally alert. She was well nourished, yet decidedly undeveloped. The skin was thin and hairless. In 1925, when 9 years of age, frontal headaches developed. She vomited frequently. Vision in the left eye became impaired, and glasses were fitted at this time. Her condition gradually grew worse. Her gait became unsteady. Somnolence deepened into a stupor, and it was not until 1927 that she again became mentally alert. The headaches diminished and the vomiting ceased. She returned to school and was advanced rapidly. It was necessary to change her glasses frequently, and except for the slowly developing visual impairment and the cessation of growth, the symptoms had abated. She remained in a preadolescent state physieally, Menses have never occurred.

Since August, 1932, her vision rapidly failed; the frontal bitemporal headaches increased, and she became drowsy.

She was first seen by us in February, 1933. Physically, she resembled a well nourished child of about 9 years (although, aetually 17 years of age). Secondary sex characteristics had not developed. The skin was thin, dry and hairless. Anosmia was incomplete on the right and eomplete on the left side. There was eomplete primary optic atrophy of the left dise with only a faint perception of light. The right disc was pale. The patient could hardly see enough to get about. With the aid of glasses, a perimetric field of the right eye could be taken. This showed a moderate constriction of the entire field, with a marked temporal field defeet. There has never been a polyuria or polydyspia. Roentgenograms revealed an enlarged sella turcica with a flaky ealeified area above. Blood and urinalysis were negative.

She had been exposed to mumps three days prior to her examination. After the ineubation period had passed, a left frontal osteoplastie flap was turned. A large bluish green mass bulged from beneath and behind the optie ehiasma. The thin chiasma and the anterior eommunicating artery were tightly stretehed over the anterior surface of the eystie tumor. A needle was inserted and approximately 40 e. e of yellow syrupy fluid, rieh in eholesterin erystals, was aspirated. The eyst wall was ineised. Three or four seoops of solid tumor were removed with a pituitary spoon. Small portions of the eyst wall were removed. No attempt was made to remove the entire eyst wall but, instead, the eystie eavity was fixed with Zenker's solution and preparation for elosure made. The patient left the table in good condition and made an uneventful eonvalescenee. She left the hospital on the tenth post-operative day.

The headaehes were eompletely relieved by the release of intraeranial pressure and have

*Read before the Jefferson County Medical Society.

not recurred since the day of operation. Vision in the right eye improved rapidly. The temporal field defect of the right field of vision had greatly improved by June 6, 1933, about 3 months after the operation. By September 1, 1933, the defect had completely disappeared. The patient had gained 6 pounds in weight and 3cm in height. She has subsequently returned to school, able to see and carrying on her studies with decided improvement. The left eye remains blind. The destruction of the left optic nerve was so complete that function did not return on relief of compression.

Comment: Craniopharyngioma can be detected before the acute symptoms appear, by careful search for signs of hypopituitarism and hypothalamic dysfunction. Roentgenograms are of great value, as 80 per cent show suprasellar calcification. Early diagnosis and operation will prevent the permanent loss of function of important structures with such disastrous effects as blindness, dwarfism and other physical and mental infirmities.




Fig. 1. Perimetric field before operation. Note temporal field defect.

## DISCUSSION

**M. C. Baker:** I saw this patient for the first time in February, 1933. She presented the appearance and stature of a child of eight, with the mental characteristics of a child of eleven or twelve. One could hardly believe that she was really seventeen years old. Her chief trouble at that time was loss of vision. She was wearing glasses which had been given to her about two years previously. Careful refraction showed vision in the right eye to be 22-100, while the left eye was practically blind except for light perception. With the aid of glasses the vision in the right eye was improved to 20-100 but it was impossible to improve the vision in the left eye.

Dilatation of the pupils and careful examination of both eyes revealed definite optic nerve atrophy, complete in the left eye and very marked in the right. I made diagnosis of pituitary tumor and sent the patient to Drs. Spurling and Jelsma who operated upon her in March, 1933, after which I lost sight of her until September, six months later. At that time, under careful refraction, I was able to improve the vision in the right eye to 20-30, but the vision in the left eye was still limited to light perception and will probably remain so throughout life.

This remarkable improvement in vision was to me the most gratifying feature of the case. The child has also improved markedly in intellect and in general appearance, and has grown considerably.

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# SURGERY UNDER DIFFICULTIES*

N. M. Garrett, M. D.

Brodhead.

I have nothing but praise for our modern hospitals, equipped with up-to-date diagnostic and therapeutic appliances and fortunate indeed is the surgeon whose work can be done there with a trained anesthetist, a trained assistant and an abundance of nurses and fortunate is the patient who can avail himself of the services of the up-to-date surgeon, in one of these modern institutions. It makes me realize my own short comings and limitations when I see the excellent work being done in them.

While thinking of the ultra modern in medicine and surgery let us turn to the other side of the picture. For economic and other reasons, probably not more than one-half the population of Kentucky can readily avail themselves of the services of the best surgeons and hospitals. Some of them are many miles from a doctor. In many counties there is not a hospital of any kind. Many of these people when in urgent need of attention have little, or no, ready money and by the time they can make arrangements to go to a hospital, if they are able to do so at all, the time when surgery would have been most beneficial has passed. What is to be done with them when a serious accident befalls them?

If we will bear in mind the principles of asepsis and realize that it can be attained in the most humble cabin, much can be done for these unfortunate people. If we do not have time to steam sheets and towels they can be boiled. A pretty fair steam sterilizer can be made with a wash boiler, or a fifty pound lard can. All men practicing in remote rural communities should have on hand a supply of sterile suture material and a few dressings that have been run through the sterilizer. In these cases necessity is sometimes "the mother of invention."

When I first moved to my present location, in the foothills of the Cumberlands, I saw an old man, about seventy years old, who had pleurisy with effusion. My equipment had not all arrived and I did not have my aspira-

*Read before the Seventh Councilor District, Crab Orchard July 26, 1934.

tor, but with a 20 cc. syringe, which I would fill and empty, leaving the needle in situ, I drew about three and a half pints of fluid from his right pleura and he lived more than six years thereafter.

A young man had been so unfortunate as to cut his lower leg with an axe, to such an extent as to leave a groove, about two and a half inches long, in the tibia. The surroundings were very unfavorable for surgery, the family being unable to furnish a clean towel or clean cloth of any kind, but one of the neighbors furnished a soiled sheet, which I boiled and was able to use for towels. Without trained assistance of any kind and very little from the family, under local anesthesia, I repaired the injury and the wound healed by first intention.

One snowy night I was called to the country to attend a primipara, whom I found to have a contracted pelvis, in that her coccyx extended into the cavity of the pelvis more than I ever saw before or since. I was concerned as to the outcome. On account of the condition of the roads medical assistance was remote, though not very far in actual miles. I made the trip on horseback and I do not think I ever went through so many gates before. I felt that I might be able to deliver her by doing a pubiotomy, but I did not have a Gigli saw with me. I administered ether and did a forceps delivery without much trouble. She had a perineal laceration extending to, but not into, the bowel. I again gave ether and repaired the laceration with obstetrical catgut. I did not see her for several months, at which time I was called to see the baby for some minor complaint.

Several years ago I saw a young man in the country who had received a number of knife wounds. I treated nine of them. He later said that there were thirteen. When I arrived he was lying on the floor, at the house of a neighbor and a number of people had gathered in. I gave him a hypodermic of morphine and he was placed on a table. After boiling the instruments I started the ether. I asked if any one present had ever given ether and one man said that he had. He was a man on whose daughter I had previously done a forceps delivery and he had continued with the ether after I had started it. In this case he continued with the ether, under my supervision, and we kept the patient satisfactorily anesthetized for about an hour.

After a casual inspection of his most serious injuries I concluded that a stab wound in the chest was the most serious. It extended into the pleural cavity, as evidenced by the fact that air could be heard passing through it when he breathed. I closed this wound with catgut, from as near the bottom as I could conveniently get. He had a stab wound in the left arm which was also closed with catgut. It healed nicely, but he claims that this arm is weak. One of the most formidable looking wounds that he had was on his left side, extending for about eight or ten inches, from his back down over the abdomen, however it was not over one-half or three-fourths inches deep, and did not penetrate the peritoneal cavity. He had so many wounds that my, more or less, sterile dressings gave out and I had to cover one or two of the larger wounds with one of the towels, in which the dressings had been done up. He was given tetanus antitoxin and all the wounds that I treated healed by first intention.

All this was done by lamp light without trained assistance.

## PROCTOLOGY IN GENERAL PRACTICE*

William J. Martin, M. D.

Louisville.

In spite of the fact, that you often hear the plea broadcast for the return of the family physician, and a decrease in the number who specialize, specialization has a definite place in medicine and is undoubtedly here to stay. That the so-called family physician has a place in medicine is not denied. He has and always should have. The fact that this type of physician is relatively less is due, to a large extent, to the advance of transportation facilities, and might well be likened to the disappearance of the general store in the rural and suburban districts.

Dr. Wm. J. Mayo recently said, "The rapid growth of medical knowledge has out stripped the intelligence of any one man. The physician no longer can undertake the treatment of all types of diseases without consultation with other physicians who have devoted special attention to the various phases of the disease under consideration." To specialize, one should have a comprehensive knowledge of the anatomy and physiology of that portion of the anatomy in which he wishes to do special work. This can not be acquired in a few weeks time. It requires months of study in a recognized institution. At present there are a few medical centers which offer this type of graduate course and each year sees better trained, ethical men going into the specialties. Men who are cooperating in the diagnosis and treatment of diseases with the internist and surgeon.

Insufficient numbers of properly trained proctologists, no doubt, in part, accounts for the large number of "colon washers" and "injection specialists" which have arisen in

*Read before the Jefferson County Medical Society.

our midst. Lack of knowledge of the cause and treatment of anal and rectal diseases, by the general practitioner, drives a large number of sufferers to charlatans and quacks.

It is not the intention of this paper to add anything to the armamentarium of the specialist. It is for the purpose of pointing out a few salient features of proctologic practice to the general practitioner and an attempt to aid him in avoiding some of the pitfalls which so many of us have encountered.

In the past few years great strides have been made in our knowledge of the large bowel and anus. Buie wrote a monograph dealing with proctology which is an invaluable aid to practitioners. Larson and Bargen have made most valuable additions to our knowledge of the physiology of the colon, in their most exhaustive work on, Action of Catharties on Isolated Dog's Colon. They dealt with both the secretory and motor activity. Curry made a valuable addition to this in his work on, Studies on Absorption and Excretion in Segments of the Colon of Man. This work was done on patients who had a colostomy and in this way he was enabled to control his experiments very carefully. Friedenwald and Feldman made a valuable contribution in their work, The Prolonged Use of Colon Enemas upon the Bowel in Animals. They concluded, "that the prolonged use of rectal injections and irrigations may result in the production of a variety of colonic affectations of a more or less severe degree." Pope and Buie, Steward and Rankin, have made contributions to our knowledge of the blood supply of the large intestine which has improved the technic and also lowered the mortality following resections, especially those around the rectosigmoid. Rankin, Coffey, and others have made valuable additions to the technic of colon surgery.

Lymyphopathy venera or lymphogranuloma inguinale, sometimes called "the fourth venereal disease," is rapidly becoming known as one of the chief causes of anal and rectal stricture. Gonorrhea of the rectum and anus is being more widely recognized as a cause of stricture. The belief that most rectal strictures are luetic in origin is fast being relegated to the same status as is such terms as "biliousness," and as "colitis" in its most generally used sense.

Tucker and Hellwig in their work on Histopathology of Anal Crypts, have brought us more knowledge of the anatomy of the anal canal and a better understanding of the cause of many anal complaints.

The knowledge is fast spreading that to successfully eradicate the causative factor in peri-anal and peri-rectal abscesses you have to eliminate the primary or internal openings of the resulting fistulous tract. It does not suffice to simply incise the abscess.

It has been varying estimated that from one-fifth to one-third of our population suffers with some form of colonic or anal disease. I believe that it can be safely stated that no class of patients are more miserable, both physically and mentally, than those who have disorders of the colon and anus. It can also be added that no class of patients, as a general rule, receive so little attention to their complaints in these areas as do these. The general run of physicians have a much more comprehensive knowledge of urinary diseases, and diseases of the eye, ear, nose and throat than they do of colonic and anal diseases. To the large majority of the laity, all dysfunctions of the large bowel are colitis, and of the anus and rectum "piles." It is surprising how many physicians hold the same opinion. How frequently we hear a patient say, even though it turn out that he be suffering with bleeding, pain, constipation, diarrhea, or any other bowel symptom, "Doctor I am suffering with piles." A grievous number of times the doctor agrees with the patient without making an examination. He prescribes some laxative or an ointment, and the patient goes away glad that the doctor did not examine his lower bowel and anus, and the doctor is satisfied because he did not have to do the job. Sir William Osler once said that the first and chief duty of the consultant is to examine the rectum, because usually this is the only part which has not been examined.

It is very desirable that practitioners and surgeons should have sufficient knowledge, of the more common anal and colonic diseases, to insure against error in the diagnosis and treatment of such diseases, just as they make it a practice to learn something of such diseases as are commonly found in the genito-urinary tract and the eye, ear, nose and throat.

A highly specialized knowledge of proctology is not necessary for one to be able to distinguish between the obscure and the more commonly encountered lesions. If just enough were learned about the characteristics of a normal rectal mucosa and a proper examination were done to determine the presence or absence of a cancer before the patient is treated for hemorrhoids, it would be a decided step forward. A large clinic in the middle west reported that approximately 30 per cent of the patients seen with rectal and sigmoid cancer have been operated or treated for hemorrhoids. A patient who comes in with the familiar complaint of, "I have the piles," should be given a fair chance for his life instead of agreeing with him and

giving him an ointment or suppositories, and allowing a possibly operable cancer to become inoperable. It would probably be life saving in many cases if all complaints of dysfunction of the bowel were assumed to be carcinoma, until it has been proven, by the employment of the diagnostic aids now at our command, that no carcinoma exists.

The proper examination of the lower bowel and anal region is simple and the required equipment small. A kindly voice, a sympathetic attitude, and a gentle touch are of immeasurable aid to the diagnostic instruments necessary. The necessary instruments consist of an anoscope, a sigmoidoscope, with the accessory electric equipment, an inflating bulb, and a probe.

The type of instruments used is largely a matter of personal preference. I will only refer to the sigmoidoscope. It is my belief that the sigmoidoscope with the light at the distal end is better than those which have a light at the proximal end, or those which are lighted by reflected light from a head mirror. I base this on the fact that with the light right down on the mucosa you get a truer picture of the color of the tissue. Several times I have had patients referred to me, following proctoscopic or sigmoidoscopic examination, with a diagnosis of an inflammatory condition of the mucosa, and I have found what I believe to be a normal mucosa. Invariably, I have found that the previous examination had been done with either reflected light or a proximal light. Even with the distal light, if the end of the sigmoidoscope is held an inch or two away from the wall of the bowel, the mucosa will look several shades darker than if the instrument is almost in contact with the mucosa. As the scope is pushed nearer to the mucosa the color can be seen to fade. I have demonstrated this to referring doctors several times to their satisfaction.

The examination of the lower bowel, up into the sigmoid, is not difficult if you gain the confidence of the patient and do your manipulation gently. Buie uses what he calls "vocal anesthesia" to reassure the patient, and to acquaint him with what you are doing, and to instruct him as to what you want him to do to co-operate. No general anesthetic should ever be used. In very painful anal conditions, such as a fissure, application of a swab of 10 per cent cocaine or 2 per cent butyn will make the difference between success and failure of the examination.

The position during examination is somewhat a matter of personal preference. I prefer the inverted position, and obtain this by means of the Buie table. In this position the patient is on the table, head down, supported on his elbows and thighs. The form of the table is such that the abdomen does not touch it, and the abdominal contents fall towards the diaphragm, thus putting the lower bowel on a stretch.

Digital examination should always precede instrumentation as it accustoms the anus to a foreign body, and gives you warning of any low lying lesion which might be injured by the passage of instruments. I believe that this is all the information that can be obtained by the finger. I am unconvinced that hemorrhoids and fistulae can be diagnosed by digital examination.

The introduction of the sigmoidoscope should be done gently, remembering that the anal canal and the rectum are at an angle to each other. As soon as the instrument passes the sphincter muscles, the obturator should be withdrawn. It is a pernicious practice to attempt to pass it blindly beyond this point. A search of the literature will reveal many reports of perforated bowel as a result of this. There must be many more which are unreported.

There are several types of low colonic ulcerations which may be encountered. The ones usually seen are those due to chronic ulcerative colitis, amebic ulcers, and tuberculous ulcers. It is not within the scope of this paper to give their diagnostic characteristics. If one is in doubt as to the presence of an inflammatory lesion of the lower bowel, this doubt may be cleared up by the insertion of an anoscope or sigmoidoscope and rubbing the surface with a cotton swab. A normal mucous membrane will not bleed after such slight trauma.

Malignancies present a characteristic appearance. They are usually single, and are much larger than any other ulcerations seen in the bowel. The adjacent mucosa is not involved, whereas, with inflammatory ulcers the involvement is more widespread and the adjacent tissues show an inflammatory reaction.

Strictures, if low lying, may be felt on digital examination. If higher up, they must be looked for with the proctoscope or sigmoidoscope. They may be caused by many things and their etiology is not within the scope of this paper.

Hemorrhoids are the most common anal disease, yet the fact that a patient who complains of hemorrhoids has hemorrhoids should be proven, and not assumed. It is well to remember that uncomplicated internal hemorrhoids are never painful. When pain is present you must search for a complication.

Knowledge of the anatomy of the anal

canal is an excellent aid to the diagnosis of disease in the anal region. In the very complex embryonic development of the human fetus the hindgut projects downward through the perineal region where it meets and unites with the proctodeum, which has dimpled in posteriorly. Thus, the skin unites with the mucous membrane of the rectum, overlapping it and forming a serrated margin known variously as the dentate margin, the dentate line, and the pectinate line. The difference in the anatomic structure below and above this line is striking. The anal canal is that portion which is covered by pavement epithelium and has no mucous glands. Above this, in the rectum, there is columnar epithelium with mucous glands. The nerve supply to the region below this line arises in the sacral plexuses, and carries both motor and sensory fibers. Thus, it is seen, why fissures, thrombosed external hemorrhoids, and other afflictions of this region, below the dentate margin cause so much pain. On the other hand the nerve supply above this line is sympathetic. The rectal and colonic mucosa have no sensory nerve supply, and pain, one of our most helpful symptoms, is absent. However, if a lesion has progressed far enough to cause obstruction or tenesmus, pain will be present. Roughly, the lymphatics drain in a different direction above and below the dentate margin. Those from the cutaneous area, in and around the anus, go forward to the inguinal group of glands. Those in the mucosal area, drain into retrorectal nodes and the nodes in the mesocolon.

With this knowledge of anatomy many pitfalls of diagnosis and treatment are avoided. If a hemorrhoid is covered with skin it is of the external variety, if it is covered with mucous membrane it is of the internal variety even though it be prolapsed through, and staying outside the anal canal. A very frequent error which is made is that of diagnosing an hypertrophied anal papilla as a rectal polyp. An hypertrophied anal papilla, which frequently reaches the size of a grape, is often mistaken for a prolapsed rectal polyp. The constant action of the sphincter muscle often elongates the base of these, forming a pedicle which allows them to prolapse out of the anal canal. Close inspection will reveal that they are covered with skin if they are papillae, and mucous membrane if they are rectal polyps. Occasionally, if they stay outside long enough, the mucosa of a polyp will take on an hypertrophied appearance which will look like skin. If an instrument be inserted, and the pedicle traced to its origin it may easily be decided whether it is a papilla, which will have its origin at the dentate margin, or a polyp, which will have its origin from the mucosa. The origin makes a difference in the treatment. If it be a papilla an anesthetic will have to be used to remove it; a polyp, it can be removed without an anesthetic.

After the sigmoidoscopic examination has been completed, it is well to insert an anoscope and look for lesions in the anal canal. A careful examination, under direct vision, is essential here for proper diagnosis. Infection of the crypts and papillae should be looked for. So-called anal fissure, or irritable ulcer, is probably one of the most common causes of pain of defecation. This, an ulcerous lesion, is usually situated in the posterior midline, occasionally in the anterior midline, and very rarely in the lateral wall, involves only the skin of the anal canal, and rarely extends as far as the dentate margin. Above this is usually found a hypertrophied anal papillae, and below an external skin tag. This is called by some, "the triad of anal fissure." The mistake of calling simple anal abrasions anal fissures, and the treating of them by the application of some chemical or cauterizing agent is frequently made. Abscesses and fistula originate as infections admitted through the anal crypts. The primary opening of fistulous tracts is invariably found in these crypts.

The statement is frequently made that any good doctor can inject hemorrhoids. This stands without challenge, provided he learn what to inject, when to do it, and what to do it with. Obviously, one should not try to do it by instinct alone. In the manner of Samuel Johnsons comment on the woman preacher, the surprising thing about it is not that it is done badly, (one expects that) but it is remarkable that one does it at all without bothering to learn how. It is safe to inject only uncomplicated, internal hemorrhoids.

One of the most important considerations in modern proctologic practice is the pre- and post-operative treatment. The pre-operative treatment for operations around the anus is simple. Cleansing enemas the night before, with an oil retention enema, to be retained during the night, followed by cleansing enemas in the morning, is all that is required for the preparation of the bowel. I believe this to be superior to laxative and cathartic drugs as they have a tendency to cause many loose stools and it is embarrassing to have a lot of stool come down over the operative field while the operation is being performed. The enemas should be given long enough before the time of operation to insure their being expelled. The sedatives used should be suited to the individual, and type of anesthetic used.

The post-operative treatment is, I believe, of paramount importance. Frequently a poor

operative procedure can be turned into a good result by proper after care. Vice versa, a good operative procedure is often spoiled by improper post-operative treatment. Keeping the operative area mechanically clean, the application of hot packs, and mild antiseptics, and the taking of hot sitz baths, along with the relatively high immunity of the area, will make a great deal of difference in the amount of after-pain and deformity present following surgical procedures in this field. The packing of wounds, in which the anal sphincter has been cut for longer than thirty-six to seventy-two hours, will frequently result in some degree of incontinence. At the end of seventy-two hours all packing should be out, and no more put in. This will give the cut ends of the sphincter an opportunity to appose. It is not necessary to administer anything to restrain the passage of a stool. The natural defense of the area will, for two or three days, resist any effort to defecate. The giving of laxatives to insure a loose stool is not wise. The continual seepage of infected material over the operative area keeps it bathed in a discharge which adds to the discomfort, and delays healing. The passage of a formed stool should be encouraged, as it will cause a gentle dilatation of the anal canal, and help iron out any adverse adhesions which might form. If anything be necessary to encourage defecation, a warm saline enema is best. Suppositories, if used to any extent, will cause a loss of sensation, the act of defecation will be delayed, and fecal impaction will possibly result. Dilators have no place in modern proctologic practice. Few patients have the will power to inflict upon themselves enough punishment, by the insertion of dilators, to overcome any stenosis which might occur following operation. If enough deformity has resulted, so as to interfere with defecation, the surest and most humane way is to administer an anesthetic and dilate with the fingers or perform a plastic on the anus.

One of the greatest objects in proctology today, is to facilitate the diagnosis of malignant growths, thereby permitting cancer to be attacked at an early stage. Rectal examinations should not be limited to the use of the finger alone. Treatment of hemorrhoids should never be undertaken until a thorough and satisfactory examination has been made of the anus, rectum, and lower sigmoid. To quote from Buie's Presidential Address before the American Proctologic Society, on Ideals in the Special Training of Proctologists, "It is our earnest desire to put the practice of proctology everywhere on a par with the practice of medicine generally. When we reach even the ideal of our present means and capabilities, the patient will no longer dread the rectal examination, nor shrink from the recollection of his treatment. He will have full confidence in his general practitioner, and his specialist and there will be nothing, either in the shortcomings of the profession or the extravagent claims of the charlatan to debar him from the early advice and skillful treatment that spell the difference between success and failure in the whole field of medicine."

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## FRACTURES OF THE LOWER EXTREMITY; SOME NEWER CONSIDERATIONS*

R. A. Griswold, M. D. and
R. O. Joplin, M. D.
Louisville.

The work presented tonight is based upon two principles laid down by the author of an outstanding treatise on fractures: first, "All the bones get consolidated more slowly if not laid properly and if not kept steady in the same position," and second, "It should be kept in mind that exercise strengthens and inactivity wastes." This writer minutely described methods and positions of reduction and the proper directions of traction and counter-traction. He used a fracture table similar in principle and design to the Hawley table. The fundamentals of the Thomas splint were known to him. He used wax instead of plaster of Paris for dressings. He did not employ the all too prevalent method of interfering with union by inserting foreign bodies at the fracture site. His name was Hippocrates. The x-ray, local anesthesia, and skeletal traction are almost the only improvements which have been made on his technique.

With the advent of the x-ray there arose a demand for better anatomical and functional results in the treatment of fractures. Not the least of reasons for this was the enactment of Workmen's Compensation Laws and the ability of laymen on juries to recognize deformity on an x-ray plate. This demand was answered by a host of new methods of treatment, numerous techniques for internal fixation and, most important of all, the development of skeletal traction by Steinman, Kirschner, Boehler and others.

The reduction of a fractured bone is a problem in mechanical engineering involving the control of known forces transmitted to the fragments through the muscles attached to them. As often carried out it lacks the

*Read before the Jefferson County Medical Society.

precision of other mechanical arts and does not compare favorably with the accurate technique employed by an expert machinist, cabinet maker or dentist. The care of fractures after reduction consists in complete uninterrupted fixation of fragments and maintenance of the normal nutrition of the extremity. Boehler has shown that the former is best obtained by the use of a non-padded cast and the latter by complete functional use of the part. Active normal use is natural physiotherapy and is superior to artificial physiotherapy in that it is continuous rather than intermittent.

Since the inauguration of the fracture service of the Louisville City Hospital in July, 1933, we have largely adopted the methods of Boehler, modifying them to suit our needs. These methods and our adaptions of them to fractures of the lower extremity are presented tonight. Boehler's method may be summarized as (1) accurate reduction under local anesthesia; (2) free use of skeletal traction in line with the direction of the proximal fragment, (3) the use of non-padded casts with walking iron heels to transfer the weight to a point above the fracture. In major fractures of the shafts of the long bones the weight bearing cast is applied only after partial union has taken place. Our modifications of Boehler's method are, the use of skeletal counter-traction by Steinman pins through the proximal fragments as well as skeletal traction on the distal fragment as also used by Caldwell and Anderson, closely incorporating these pins in a Boehler type cast to maintain position and allow earlier weight bearing in fractures of the shafts of the tibia and fibula, the application of positive skeletal control of both fragments to fracture of shaft of the femur making early ambulatory treatment feasible.

The Non-padded Chest and Walking Iron. A non-padded cast is one in which the plaster is applied directly to the skin, using a posterior and an anterior or sugar tong splint as a basis before applying the circular plaster bandage.

Technique: Anterior and posterior splints 5-6 inches wide are applied and well molded to the leg and foot, the posterior splint extending well beyond the toes. The splints are cut transversely at the heel and instep and the edges carefully molded about the heel. The cut edges are covered with a small strip of plaster for reinforcement. When pins or wires are used they are incorporated in the plaster splint. When all irregularities have been removed from the splints, especially over the calf, heel, and foot, the whole is wrapped with circular plaster bandage. In applying the circular plaster the bandage should be rolled about the leg and foot and not drawn tight.

The cast should be molded to the leg and foot and around the bony prominences of the knee with the flat of the hand until the plaster is hard. The ankle should be maintained at right angles, and the knee in extension.

The pelvic portion of the non-padded cast is applied with the patient on the Hawley table. The bony prominences of the pelvis are padded, the padding being held securely by bandage. A sausage shaped roll of padding is placed along the gluteal fold and around into the perineum. The end of the bandage crosses the hip joint anteriorly and meets the opposite end at the lateral portion of the ilium. This protects the tuberosity of the ischium. The plaster bandage is then applied and plaster splints are incorporated in the circular plaster for reinforcement. The splints are important to keep the cast from cracking at the hip.

The cast is molded while it is hardening, special attention being paid to:

(1) The space between the greater trochanter and iliac fossa to prevent upward movement of the femur.

(2) The region over and under the ilium on both sides.

(3) The region over the symphysis.

(4) The area under the ischial tuberosity. The weight of the body rests on this point and the roll of padding used acts as a cushion.

After the cast is applied, the date of injury, date of application of cast and a drawing from the x-ray of the fracture is made with an indelible pencil.

Precautions:

1. Good plaster bandages are essential.

2. The splints should be well smoothed out and any small lumps of plaster removed.

3. Splints should be wet enough to be pliable and easily molded to the leg and pelvis, especially about the bony prominences.

4. Extend the posterior splint to or beyond the toes to prevent flexion contraction of the toes and to protect the ends of the toes.

5. The dorsal part of the cast should extend to the metatarsophalangeal junction.

6. Do not change the position of the leg or foot while the cast is hardening because this will produce wrinkles in the plaster.

7. Avoid any point pressure on the cast.

8. Do not apply the walking iron to the cast before it is hard as it may cause pressure over the bony prominences.

9. A perfectly fitted cast does not cause pain or discomfort. Investigate complaints of patient concerning pain from the cast, or

it may give him an opportunity to investigate you.

10. Do not hesitate to cut or remove a cast that causes pain.

11. Elevate the extremity for a day or two to prevent swelling.

12. For the first 24 hours the toes should be repeatedly and carefully examined for any circulatory disturbances.

Application of Walking Iron:

The walking iron is made of strap iron and is 24 x 3-4 x 1-8 inches with a cross piece 4 inches in length at each end. It is easy to bend the iron to the desired shape to fit around the ankle. The walking surface should be U shaped.

The iron is applied after the cast has dried and has been on long enough to discover if it is going to cause the patient any discomfort. The shanks are fitted over the malleoli and are held in the longitudinal axis of the leg. The distance between the sole of the cast and the transverse part of the iron should be 2–3 fingers breadth. The upper transverse strips are bent to the contour of the cast.

The iron is held in this position and secured with circular bandage. The bandage should be carried through the iron loop and secured on both sides to prevent forward or backward movement. To prevent the patient from slipping, the bottom of the iron should be padded or wrapped with tire tape. A small section of garden hose makes an excellent cushion.

Precautions:

Walking is difficult if the iron does not lie exactly in the axis of the leg and at right angles to the foot. If the sole portion is too far anterior, it causes the patient to walk with a hyper-extended knee, causing pain in the patellar region. If the sole portion is backward the patient attempts to flex the knee when walking and the toe of the cast comes in contact with the floor and soon breaks. If the space between the walking iron and the cast is too great, walking is unsteady and the pelvis on that side will be elevated. However, if the foot is put up in plantar flexion the space must be increased to prevent walking on the toes of the cast.

Advantages of the non-padded cast and walking iron:

1. There are fewer pressure sores because the pressure of the cast is distributed over the entire surface of the part and there is no padding to slip and produce pressure points over the bony prominences.

2. The fragments are held securely, due to the use of the limb, there is no atrophy of the soft parts, as there is in padded casts which soon become loose and allow motion.

3. There is no pain at the fracture site if the fragments are accurately reduced and held securely in good position; therefore the limb and adjacent joints can be used to the fullest extent.

4. By walking on the injured leg, soft tissue and bony atrophy is prevented, circulation improved and callous formation hastened.

5. By the use of the leg the patient does his own physiotherapy and there is no need to remove the cast before bony union has taken place in order to begin massage, active, and passive treatment on the immobilized joint. When the non-padded cast is removed there is usually at least 50 per cent motion in the previously fixed joint.

6. Last, but not least, hospitalization is reduced to a minimum with a saving to the patient. His general condition can be markedly improved, due to the fact that he can be up and around.

Conclusions:

The ideals of fracture treatment are; Exact reduction of the displaced fragments, continuous fixation until bony union takes place, during the period of time between 1 and 2 active use of the adjacent joints of the injured limb and of the entire body, with the avoidance of pain, to secure good circulation and to prevent bone and muscle atrophy and joint stiffness.

The methods we are presenting tonight come nearer to fulfilling these ideals than any method we have used in the past.

The Shaft of the Femur: Fracture of the shaft of the femur presents a more complicated mechanical problem than any other fracture. There are certain usual deformities which may vary somewhat with the type and location of the fracture. Shortening is almost universal. As a rule the proximal fragment is abducted, everted and flexed anteriorly. The distal fragment is adducted and flexed posteriorly. These are the positions of muscle equilibrium. The usual method of treatment is to first restore the length of the limb by traction and counter-traction. This causes a tightening of the elastic, fibro-muscular tube in which the bone lies and partially restores alignment. Since there is no direct mechanical control of either fragment the limb is placed in the position of muscle equilibrium to complete the reduction. That is, the knee is partially flexed to relax the gastrocnemius group and the distal portion is lifted and abducted to bring it into line with the flexed and abducted proximal fragment. Maintenance of this position is attempted by continuous traction or by immobilization in plaster. There are numerous objections to these methods. Continuous

traction apparatus requires almost hourly readjustment to prevent displacement. Accurate reduction and maintenance of position is often impossible. Fractures reduced and encased in plaster frequently slip from position in the cast. These considerations have led some surgeons to almost routinely carry out open reduction with internal splinting by a foreign body at the fracture site. This has certain obvious disadvantages.

As a result of experimentation during the last six months, a new method of handling these difficult cases has been developed on the fracture service of the Louisville City Hospital. Under spinal or local anesthesia the length of the limb is restored on the Hawley table. Traction is applied by Collin's hitches over the ankles and counter-pressure made against the ischium of the well side. A Steinman pin, 6 to 8 inches long and 1-8 inch thick, is passed transversely through the distal fragment at the level of the adductor tubercle. This pin is pulled upward or anteriorly and slung from the suspension bar of the table, correcting the posterior flexion of the distal fragment. A second pin, 8 to 10 inches long and 5-32 inch thick, is passed in an antero-posterior direction through the proximal fragment at or slghtly below the level of the lesser trochanter. Motion of this pin in a clockwise direction corrects anterior flexion of this fragment. Pressure medially combined with abduction of the distal portion of the limb corrects the deformity from the anterior aspect. Fluoroscopic or roentgenologic check of position is made and any residual correction carried out. A non-padded plaster spica is applied from the zyphoid to the toes on the fractured limb closely incorporating both pins. An important part of this spica is a built-in pad over the tuberosity of the ischium similar to the ring of the Thomas splint and taking up a portion of the counter-traction force. A walking iron is added to the cast. Properly constructed, this cast weighs 12 to 14 pounds and is easily carried by most patients. In a few weak patients we have extended the cast only up to the groin, firmly incorporating the upper pin but allowing free motion of the hip. These patients can sit up in bed or the wheel chair with little risk of displacement of the fragments. All patients in spica casts are encouraged to walk and bear weight as early as possible. This has been accomplished as early as the second day. Crutches are used at first, but healthy young adults may soon walk with canes and children often require no external support. Both anatomical and functional results of this method have been superior to any other we have observed. Callous is abundant and union occurs early. The natural physiotherapy of active use prevents atrophy and preserves the strength of the limb. It is not unusual to have 45 degrees of painless active flexion at the knee and complete function of hip and ankle immediately after removal of a walking spica. This is far superior to the state after removal of an ordinary padded spica and at least equal to the result with continuous traction and artificial physiotherapy.

Ten cases have been treated in this manner, five of whom have not been made ambulatory for reasons such as psychoses, other fractures, or transfer to other hospitals shortly after reduction. Four patients have borne weight on the third to the fifth day after fractures. One patient who had a compound (gunshot wound) fracture walked on the 8th day after fracture and the first day after application of the cast. The results to date have been excellent in 9 cases. One was transferred elsewhere and the final result is unknown. Shortening is entirely absent and deformity is minimal. Function is exceptional. Hospitalization is decreased to an average of about 12 days in patients without other disease or injury than fractured femur.

This research in treatment in fracture of the shaft of the femur was the natural outgrowth of our method of treating fractures of the tibia and fibula. The experiments were carried out with a 1913 model Hawley table and a rather cumbersome unprotected x-ray apparatus. As a routine clinical procedure a modern Hawley table and a shock-proof fluoroscope are essential. The tremendous decrease in hospitalization easily justifies this equipment however, if a large volume of cases is being handled. We now have enough evidence of the superiority of this method over former procedures to terminate the experiment. We expect, however, to adopt this as a standard routine method on the fracture service of the Louisville City Hospital whenever adequate equipment becomes available.

Knee and Ankle: Fractures involving these joints unless accurately reduced are very disabling due to the formation of a bony block restricting motion, or an arthritis which, besides being painful, progresses from year to year and restricts the mobility of the joint.

The Knee: There is usually an effusion of blood and serum into the joint. This should first be removed. If there is no displacement of the fragments a non-padded cast is applied from the toes to the tuberosity of the ischium with the knee in extension. The

walking iron is applied and the patient allowed to walk in two or three days.

However, when the fragments of the bone are displaced and the shaft of the tibia or femur is driven between the condyles, reduction can be accomplished only by means of powerful traction. This can be accomplished by introducing a pin through the upper part of the tibia for the femur fracture and the lower part of the tibia or os calcis for the tibia fracture. Occasionally it is better to insert a pin above and below the fracture and incorporate both pins in the plaster. This procedure is usually done under spinal or local anesthesia.

When traction and lateral compression are exerted the fragments slip back into position. This is aided by the pressure of the stretched tendons about the fragments. In several instances when a fragment still remained out of place a pin was introduced into the fragment and the latter secured in proper position. This procedure should be carried out under the fluoroscope, care being taken not to penetrate the joint.

The pins are incorporated in a non-padded cast which extends from the toes to the tuberosity of the ischium. The pins are removed in three to five weeks. These cases should be immobilized from 10 to 14 weeks. Too early weight bearing favors displacement of the fragments.

The Ankle: Simple fractures about the ankle are reduced under local anesthesia with the knee at right angles to relax the gastrocnemius muscle, and a non-padded cast applied from the toes to the hollow of the knee. If the x-ray shows a good reduction the walking iron is applied. The patient can walk without pain and the toes and knee can be actively moved. These cases are usually immobilized six weeks.

The badly comminuted fractures, and fractures with lateral, anterior or posterior dislocations of the foot with considerable part of the articular surface of the tibia broken off, are reduced by inserting Steinman pins in the os calcis and in the tibia above the ankle and applying traction and counter-traction in the apparatus. If the x-rays show a favorable reduction, the cast is applied incorporating the pins. The leg is not removed from the apparatus until the plaster is hard. In this way the weight is not thrown on the fracture. Fractures with posterior dislocation of the foot are put up in dorsi-flexion and those with anterior displacement of the foot are put up in planter flexion. The pins are removed in from 3 to 5 weeks but the cast should be left on from 10 to 12 weeks. If the plaster cast is removed too soon a new anterior, posterior or lateral displacement of the foot is apt to result.

Compound fractures of the ankle and knee are debrided and closed primarily if seen in the "golden period" which is the first 6 to 8 hours. Those seen later are debrided and packed with vaseline gauze and the non-padded cast applied.

Classification of ankle fractures:

1. Pott's fracture. 2. Inversion fracture (reverse Pott's). 3. Cotton fracture. 4. Dislocation upward.

Tibia and Fibula: The treatment of major fractures of the tibia and fibula is often unsatisfactory. Manual reduction may be difficult and is sometimes impossible. Even though good reduction is obtained, the fragments often slip during or after the application of the permanent dressing. Treatment in bed with traction is mechanically inefficient unless good counter-traction is supplied by a Thomas splint. The Thomas splint may be mechanically efficient, but is a source of pain and discomfort. Nursing care is made more difficult and long hospitalization is necessary.

The method to be described is the result of experiments carried out since last July. It is similar in principle to the methods of Caldwell and Anderson. The apparatus which we have devised supplies skeletal traction and counter-traction with accurate mechanical control of both proximal and distal fragments. It consists of a wooden base on the proximal end of which are mounted adjustable devices for holding a steel pin, inserted through the tibia at the level of the tubercle. At the distal end is a mechanical hand which grasps a pin passed through the distal fragment or the os calcis. Traction angulation and rotation are applied through this device. When satisfactory reduction has been obtained the apparatus is locked to prevent displacement. This procedure is carried out under local anesthesia. As soon as swelling permits a non-padded cast is applied from the toes to the upper thigh closely incorporating both pins. When the plaster has set, the limb is removed from the apparatus, the ends of the pins are covered with corks and plaster and a walking iron applied. Weight bearing is started at once with crutches, later with canes. Compound fractures are placed in the apparatus under spinal anesthesia and thoroughly debrided. Reduction is completed by the apparatus without introducing leverage between the fragments. Leverage kills bone and invites infection. If the fracture is less than 8 hours old, primary closure is carried out transforming the compound fracture into a simple fracture. The skin alone is sutured, no foreign body in the form of sutures or ligatures being left below the skin. If more than 8 hours old, the debrided wound is packed with vaseline gauze.

The extremity remains in the apparatus a week to ten days for observation of the wound. Plaster is then applied and the treatment carried out as for a simple fracture. It should be emphasized that debridement is a major procedure to be carried out with all the personnel, technique and ritual of a thyroidectomy or gastric resection. Infection will inevitably occur if it is considered as a minor procedure to be done in the ward or dressing room.

Fractures of the tibia alone or fractures of both bones without great displacement are treated under local anesthesia by manual reduction, non-padded cast and walking iron. From July 1st, 1933 to March 1, 1934, sixty fractures of the shaft of the tibia with or without fracture of the shaft of the fibula were admitted to the Louisville City Hospital. This did not include fractures of the condyles or malleoli. The severity of the cases received is illustrated by the fact that ten of these patients died in the first 48 hours from shock and associated injuries, such as fracture of the skull or crushing injuries of the chest. Primary treatment in these cases was naturally directed to the more serious lesions. No deaths occurred later than 48 hours after admission. Four patients were sent elsewhere after first-aid treatment. Two amputations were carried out for irreparable vascular damage, one a shotgun wound and the other a crushing injury. Amputation in the latter case was performed several days after an unsuccessful attempt to save a badly mangled extremity by debridement, reduction and closure. In six cases the tibia alone was involved. In these and in eleven fractues of both bones the treatment was manual reduction with application of a non-padded cast and walking iron. In twenty-seven fractures of both bones, the apparatus with double pin technique was used. There were seventeen compound fractures and twenty-seven simple fractures. Two infected compound fractures were treated by the Orr technique. In the remaining fifteen debridement and primary closure were carried out. In two of these sloughing of devitalized skin flaps occurred. There were two soft tissue infections. Primary healing occurred in eleven cases.

A complete statistical analysis of these few cases is not justified at this early date. Ten cases have not been followed throughout their course. In seven of the forty-four cases firm healing had not occurred at the end of 12 weeks. These cases with delayed union fall into two main groups, the spiral oblique fractures of the lower third with probable injuries to the nutritive vessels and compound fractures with large bone defects. Delayed union is notoriously common in such cases. There is a smaller group in which over-extension with separation of fragments was not corrected before the cast was applied. All these patients with delayed union are bearing weight without crutches and there is definite evidence of eventual firm union in all of them. Open reduction and fixation of fresh fractures have been entirely eliminated. One patient with malposition following treatment for six weeks in a Thomas splint was reduced in the apparatus after making an incision under local anesthesia and removing the obstructing callous.

This work was frankly experimental in the beginning, but as favorable evidence accumulated it seemed worthy of adoption as a routine clinical measure. Experiments were carried out with one piece of rather crude experimental apparatus so that it was not always possible to properly treat our large volume of cases. This applied especially to bad compound fractures which should remain in the apparatus for a considerable length of time. The necessity for secondary amputation in the case mentioned above may be partially attributed to this factor. Furthermore, experience with this apparatus has demonstrated the need of several changes to increase smoothness of operation. When sufficient new equipment is available this work will be resumed as a routine clinical procedure.

This method of treatment has reduced hospitalization of these cases from an average of 34.75 days under previous methods to an average of 8.5 days, a saving of 26 days per patient. At the Louisville City Hospital for the six month period from July 1, 1933 to January 1, 1934 this meant a saving of 1207 hospital days, or at $3.00 per day, about $3,600.00 saved in six months.

Os Calcis and Metatarsals. We have selected these two fracture sites in the foot because with the exception of the phalangeal fracture they have been the most common.

Os Calcis: Because of the disabling end results, we believe there is no condition confronting the traumatic surgeon that deserves more consideration than a badly comminuted fracture of one or both os calcis.

The simple fracture without displacement is treated in a non-padded walking cast for about six weeks. Unfortunately, the majority of these fractures one sees, are not of the simple variety.

The majority of these fractures are caused by falls or jumping from a considerable height and landing on the feet. The astragulus is jammed down through the os calcis breaking it in a longitudinal or transverse direction. It becomes wider and shorter and there are also axial displacements. The axial displacements are produced by the pull of

the tendo achilles and the widening and shortening is maintained by the short muscles of the sole of the foot.

Under spinal anesthesia or local anesthesia the hematoma and swelling are pressed away. A Steinman pin is introduced through the os calcis and another pin through the tibia about a hand's breadth above the ankle. The foot and leg are placed in the apparatus and traction is made in the longitudinal axis of the leg to pull the os-calcis down. Traction is then made in line with the axis of the os-calcis to overcome the axial displacement and shortening. A pressure clamp is used on both sides of the bone to correct the widening. While the leg is still in the apparatus a non-padded plaster cast is applied, incorporating the pins and with the foot in slight plantar flexion. The plaster is well moulded around the os-calcis and extends from the hollow of the knee to the toes.

If there is no circulatory disturbance and the x-ray is satisfactory, a walking iron is applied. The cast should remain on from 12 to 13 weeks and then an arch support should be used.

Metatarsals: I shall only mention the treatment of those fractures which have displacement of the fragments.

Under local anesthesia a rustless steel wire is introduced through the pulp of the involved toe or toes and the fragments are then reduced by traction. A non-padded cast is applied, paying special attention to moulding the cast about the sole of the foot. The sole of the cast is extended well beyond the toes, or a walking iron may be incorporated in the cast and extended beyond the toes. The steel wires are then connected to the end of the cast or iron by means of rubber bands, thus exerting continuous traction and maintaining reduction of the fragments. When a very strong pull is needed for reduction it may be necessary to insert a pin in the os calcis for counter traction. Small wooden spreaders are used to keep the wires from compressing the sides of the toes. An iron is applied and the patient allowed to walk. The cast should remain on about six weeks, then the foot strapped with adhesive and a well fitting arch support given to the patient.

## DISCUSSION

**J. A. Caldwell,** Cincinnati: This has been a tremendous treat. I want to congratulate Louisville upon having two such enthusiasts upon the subject of broken bones as Dr. Griswold and Dr. Joplin.

Possibly the three greatest advances that have been made in the treatment of broken bones in the past ten years have been, (1) local anesthesia, (2) the use of the non-padded cast and (3) making the patient ambulatory at the earliest possible moment.

The use of local anesthesia is of tremendous importance in these cases. If an attempt at reduction is not successful it can be repeated in a very short time. Again, in working in the dark with a fluoroscope one does not have to worry about the anesthesia; it will last a couple of hours and if the fluoroscopy is not successful the first time one can do it over again several times if necessary.

As to the non-padded cast, a great many men tremble at the thought of it and there is good reason why they should if they are not familiar with it because I can vouch for the fact that it is "loaded" unless the patient is in an institution and under the observation of one who can be depended upon to exercise proper judgment. However, the things that are essential to avoid catastrophe have been emphasized by the essayists.

Another big advance in the treatment of fractures is skeletal traction. There is no question that if one treats a sufficient number of cases by this method he will sooner or later have a case of infection; the ordinary laws of chance will take care of that. On the other hand, it is nowhere near the fearful thing that one would expect. As nearly as I can remember, during the period of my service at the Cincinnati General Hospital, we put pins in something more than 600 cases and I can recall but two catastrophes, one real one and the other not so bad. Skeletal traction was used quite frequently as opposed to skin plaster, and as I recall we had quite as large a proportion of disasters with skin plaster as with skeletal traction. In two cases we had to amputate. So that skeletal traction if used with proper asepsis, while it may occasionally give you something to worry about, should not be discarded. Imbedding it in plaster so that the leg is completely immobilized is a tremendous advance. It not only holds the parts absolutely still but, as has been so beautifully shown here tonight, it makes the patient ambulatory.

The ambulatory treatment of fractures of the femur is a beautiful one and I am yearning to try it. I hope my results will be as good as Dr. Griswold's.

One of the worst breaks is fracture of the os calcis. Taking it altogether, if I were to fall out of a third story window I would just as soon light on my head as my heels. These patients never get completely well. Industrial statistics throughout the world show that something like thirty per cent of os calcis cases have some degree of permanent disability.

Many of the things that Dr. Griswold has shown we are carrying out ourselves in more or less modified form. The apparatus is not exactly the same but it embodies the same principle and the more I use it the more I feel that it is the proper thing to do. The way in

which Dr. Griswold and Dr. Joplin have worked up these cases and studied them in their efforts to reduce hospitalization and disability and to promote the comfort of the patient is particularly commendable. I am grateful for the opportunity of being here and I have enjoyed the essays tremendously.

**Mischa Casper:** I have enjoyed this clinic immensely although it partakes somewhat of the disadvantages of a three-ring circus, covering, as it does, fractures from the hip to the os calcis.

The apparatus exhibited appears to be very practical. I have been using a somewhat similar method in which the pins are inserted above and below the fracture, with turnbuckles on either side so that the desired extension can be readily obtained, adjustments being made under the x-rays.

One improvement of the walking-iron is a foot-piece over which a large size tennis shoe is worn. Its advantage lies in a better distribution of the weight of the body and it is not so hard on hardwood floors.

Another improvement is in the use of roofing nails. These are soldered on an extension which extends upward at an angle of about 45 degrees. These nails extend up in to the plaster and distribute the weight higher up on the leg.

I have also evolved a double action traction splint for high fractures of the femur. This is applied by especially made gimlets that go into the anterior superior spine of each Ileum. These are connected to a rod that runs to an upright piece beyond the patient's foot. The foot then is attached to this piece by a stirrup and a Steinman pin similar to Roger-Anderson's method. The principle is to push against the anterior superior spine and pull on the leg. Thus we leave the patient's good leg free (always complain more of the good leg in Roger-Anderson method than the injured one).

This apparatus allows the patient to get out of bed into a wheel chair the next day after the injury. Another distinct advantage over the Roger-Anderson apparatus is that the sound leg bears the brunt and the patient is able to help himself in getting into and out of the wheel chair and can move about freely in bed.

Os calcis fractures are the worst we have to deal with so far as end results are concerned. I have never seen one that did not have some degree of lameness afterwards. I think that is largely due to nerve injury either at the time of the accident or from an inflammatory process that develops afterwards. Even individuals who fall only a short distance and do not sustain a fracture, have sensitive nerves in that part afterwards.

**John T. Bate:** I have been interested in the use of the non-padded plaster cast and walking-iron for the past five years and have been using it in a small series of cases, at first cautiously, and then more boldly as I became convinced that they were practicable.

There is an aphorism that "surgery advances through simplification towards perfection" but I believe this to be true. When I first had the opportunity to see Boehler's work I became convinced that this was his contribution to the treatment of fractures. While many others had used local anesthesia for various purposes, and all kinds of pins had been used for traction, he grouped them altogether and so demonstrated their simplicity in devising this traction method that it was immediately taken up all over the world.

The essayists have covered the subject so thoroughly that it is impossible to discuss all phases of it, so I will confine my remarks to a few points.

I am not sure that the two-pin technique in the lower leg is a simplification and therefore an advance or whether it is something of a complication. Certainly in some cases, where the ligaments in the knee are torn and we cannot use the traction which Boehler himself used in these cases—that is, a bar right under the knee and taking the pull against this bar—this two-pin method may be very useful. Also in cutting down the hospitalization time for economic reasons it will deserve use in some cases. However, we know that wounds of the soft parts heal better and swell less if the part be elevated over a prolonged period of time, and for that reason I feel that in the vast majority of cases of fractures of the lower leg, simple traction, with either a Steinman pin or a Kerchinger wire through the lower end of the tibia or os calcis, with the patient on a Braun frame, will give satisfactory results. As much weight can be used as is necessary to pull the fracture into line, and where this is not sufficient, additional traction can be secured with Boehler's original screw-traction apparatus. This eliminates the use of an extra pin, and with the patient's leg on a Braun frame it is under continuous traction. Then, after considerable callous has formed, say within two or three weeks or sometimes as long as six weeks, a carefully molded plaster cast is applied and the patient allowed to walk. This appears to me to be the most nearly ideal method of treating these cases, although it does not cut down the hospital expense.

I like the Kerchinger wire in preference to the Steinman pin, although some may say that my reasons are taken on theoretical grounds. Dr. Caldwell has reported that in a large series he has had a number of infections in the bone. As I compute this number which he mentioned, it represents about two-thirds of one per cent. This is a very real hazard, and if the risk can be diminished by the use of the Kerchinger wire

or the single pin, and the same improved results obtained, it is well worth while. The wire causes very little trauma, and, when removed can be cut off beneath the skin on one side and withdrawn from the other.

Just a word about the non-padded plaster cast. It is a very useful appliance and, like local anesthesia, is probably destined to become more or less universal in fracture treatment. However, there are some very real hazards connected with its use. Boehler himself lost one leg in his clinic and in that case he attributed it to the fact that some one gave the patient morphin to relieve his pain. The patient's sensation is our chief guide to the state of the circulation in the leg. Therefore, after applying a non-padded cast, no narcotics or sedative should be used. If there is pain, then the cast must be cut down, trimmed or removed, according to the indication in the particular case.

**Frank P. Strickler:** The method of treating fractures of the femur described by Dr. Griswold and Dr. Joplin have become increasingly popular in this country since Dr. Boehler's book was translated into English by Dr. Levy, of Portland, Oregon, about seven years ago.

I want to say that the application of a non-padded cast is not a matter to be handled lightly. It is quite possible that a gangrenous leg may result; in fact, I recently saw a case that had been treated in this manner and there was considerable swelling of the leg and early gangrene had started at the time I saw it. I do not believe there is any question that this method will come into general use because it produces good results when properly handled, but it appears that every one who uses it modifies it more or less to suit his own ideas.

**Jos. M. Frehling:** I would like to suggest a slight addition to the walking-iron which may be found helpful. Several of my patients who were treated in this manner complained of the shock experienced when the walking-iron came in contact with the pavement. To overcome this I took an old golf ball, cut a wedge out of its circumference and slipped it over the transverse part of the walking-iron, thus affording a certain amount of resiliency in walking and adding to the comfort of the patient.

**Geo. A. Hendon:** I have been both interested and educated by this beautiful, not to say incomparable array of results, and I feel very grateful for the addition to my store of knowledge. However, the problems presented in the treatment of uncomplicated fractures of the lower leg are relatively so very simple that it affords an ample field in which one may give free rein to his fancy without endangering his patient's life or jeopardizing his chances for recovery. These fractures are so elemental in character that they lend themselves very generously to any reasonable procedure and thereby afford the oportunity for any man to gratify his ambition for initiative and originality.

The besetting misfortune in fractures of the lower leg is non-union, but we have the means by which we can so promptly, easily and safely overcome that complication that we do not need to stand in dread or terror of it. It appears to me that the underlying principle in rapid union—or any union—of a fracture lies in the undisturbed and unembarrassed capillary circulation in the soft parts, and the method that will best meet this situation is the one that should be commended and adopted. The method described here tonight seems to embody that principle. Our efforts should be along lines that will secure the comfort of the patient and insure the brevity of the period of confinement.

My experience in this particular field of endeavor has been limited chiefly to un-united fractures of the femur, and in the treatment of fresh cases has not been sufficient to enable me to add to what has already been said on the subject.

**I. A. Arnold:** When we consider the increasing number of fractures occurring in this country as the result of the rapid transportation and machine age and the estimated time of one year before recovery takes place in the fracture of the long bones, it behooves us to give consideration to any form of treatment that will tend to shorten the hospitalization and the time for complete recovery of the injured individual.

In the treatment of fractures, we must consider the difference between the treatment of mature bones and that of the growing immature bones. In the treatment of the latter, nature is very kind to us in smoothing over lumps and straightening out angles which are due to poor adjustment and alignment; while in the former, any deformity that might be present will tend to increase if not properly reduced and fixation maintained over a considerable length of time. Displacement and angulation takes place after reduction is accomplished, most frequently within the first ten days or two weeks, but angulation may and often does follow at quite a later date after all fixation appliances have been removed. Especially is this true of the femur and forearm; therefore the advocates of the treatment as described tonight must not be too optimistic as apparently a good primary result today may be a horrible deformity later on.

Elevation in the treatment of fractures is very important which does not seem to be considered in the treatment under discussion tonight. I would like to say here that elevation of the injured member should not be more than 10 to 12 inches above that of the heart.

The pins have been used for a number of

years in numerous forms in the treatment of fractures but I have not seen them used in conjunction with a cast and walking-irons as described by the essayist. To me the non-padded cast applied before swelling has subsided may be all right in an institution where the patient is under constant observation of a trained personnel but is a dangerous method outside of such institutions.

**R. A. Griswold,** (in closing): I wish to thank the members for their generous discussion, although I was a little disappointed that more was not said about compound fractures.

Referring to Dr. Casper's remarks, none of our patients complain of marring hardwood floors with their walking irons.

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## SYMPOSIUM ON INFECTIOUS DISEASES AS RELATED TO EYE, EAR, NOSE AND THROAT

## THE PREVENTION AND TREATMENT OF THE COMPLICATIONS OF THE ACUTE INFECTIOUS DISEASES AS REGARDS THE EAR*

Will R Pryor, M. D.
Louisville.

The time worn adage of the ounce of prevention being worth a pound of cure might have been written expressly for the man on whose shoulders falls the responsibility for the present and future condition of the ears in a sufferer from one of the acute infectious diseases. How grave this responsibility is may be summed up in the claim by many authorities that over fifty per cent of the people suffer from partial or complete deafness in one or both ears. Kerrison estimates that over one hundred thousand people in New York City alone are suffering from a deafness sufficient to incapacitate them socially and economically. In this are not included the children whose ears have not been carefully examined and in whom the process is beginning to progress. With this inclusion we have, indeed, an appalling number.

Children suffer more frequently from acute middle ear disease than adults. This may be attributed in the first place to adenoids which are present more frequently and in greater size during childhood than in adult life. Also there is a greater susceptibility of children to the acute infectious diseases which so often give rise to Otitis Media. Probably the greatest part is played by the anatomical difference in the Eustachian tube in infancy and young childhood and that of the adult. It is less than half as long and yet the tympanic orifice and caliber of the bony tube are every bit as large as in the adult. Again the membranous and bony portions are more nearly in the same straight line, there being no angle at their junction. Besides, the whole tube is nearly horizontal in direction, the pharyngeal orifice being on the same level as the tympanic orifice. In the adult the pharyngeal orifice is twelve to fourteen millimeters lower.

The clinical importance of this is apparent when we consider that all ear complications must be preceded by an infection of this tube. The greatest menace to the integrity of the ear structure is the presense in the nasopharynx of masses of adenoid tissue. This tissue has an amazing faculty of increasing in size when acutely inflamed. I have had the opportunity of observing this phenomenon in both children and adults by examination with a post nasal mirror and I have seen it double and, in some instances, treble the size found in the quiescent state. Small wonder then that we are justified in drawing certain conclusions as to the relationship between the presence of adenoids and ear infection. The following will summarize:

First: We find that the great majority of children suffering from acute Otitis Media have adenoids. Second, if an examination is made of any group of children suffering from adenoids a large percentage will show some pathological condition in one or both ears. Thirdly, it is rare for children with hypertrophied adenoids to have a severe attack of one of the exanthemata without undergoing some degree of tympanic inflammation. Conversely children in whom adenoids have been completely removed usually pass through the infectious diseases of childhood without middle ear inflammation.

The specialist occasionally encounters little patients in whom ear troubles have developed after the tonsils and adenoids have been removed. I feel that the location of the adenoids is of even more importance than its size. A small adenoid which is situated close to the pharyngeal orifice of the tube is a much greater menace to that tube than a large adenoid hanging free from the middle of the nasopharyngeal vault. These adenoid growths may be small and so completely lateral that it will be necessary to remove them with the finger from the fossa of Rosenmuller where they have been holding the Eustachian tube out of alignment.

The mucosa of the tube is normally in contact. Air is transmitted to the middle ear, maintaining an equal pressure on both sides of the drum, by the action of the tubal muscles which control the opening and closing of

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the tube and its pharyngeal orifice. Depending on the virulence of the organism and the resistance of the host we will have an eustacheitis, an acute catarrhal otitis or an acute suppurative Otitis Media. The dreaded complication of the latter is Acute Surgical Mastoiditis. A less dreaded but even more alarming sequel to all three is progessive deafness.

One of the first pathological changes in tubal congestion is a closing up of the tube. This is manifested by diminution in hearing, noises and a feeling of fullness in the ear. This may subside or extend into the middle ear producing an acute catarrhal otitis. If so the feeling of fullness becomes more pronounced and persistent. There may even be some discomfort in the ear. The drum is pinkish to red. There may even be a fluid level. Treatment in either case is directed toward relief of congestion and opening the tube. Purgation, treatment of the nasopharynx and gentle inflation of the tube are indicated. I have in some cases been forced to incise the drum and inflate to completely remove the fluid.

The treatment of an impending acute suppurative otitis depends upon the severity of symptoms present and also on whether or not we have associated one of the acute exanthemata. If there is generalized redness of the ear drum in a patient with scarlet fever or measles, regardless of pain or temperature, that ear is much safer opened.

Associated with an acute coryza we may temporize depending on the amount of temperature present and pain experienced by the patient. However, a bulging drum should always be incised.

About ten per cent of patients suffering from either scarlet fever or measles develop some form of acute tympanic disease. So little diphtheria is seen at the present time that it would be difficult to obtain an estimate. However, in any of these diseases there is a tendency toward massive necrosis of the drum membrane and the longer purulent exudate remains in the tympanic cavity the greater is the danger of mastoid involvement. It is rare for any acute suppurative otitis to produce an opening of sufficient size or location to properly facilitate drainage. A safe procedure, therefore, is to treat all such cases by making a wide paracentesis in the posterior inferior quadrant. Fortunately mumps rarely produces ear complications. When it does the labyrinth as well as the middle ear is often involved, a suppurative labyrinthitis resulting or the vestibular symptoms may quickly subside leaving deafness usually complete.

The length of the program does not permit a description of the various features which present themselves in the diagnosis and treatment of an acute mastoiditis. It is the concern primarily of the specialist and is well understood by him. However, there is a phase of middle ear disease which because of its ubiquity and dire sequela commends the attention and co-operative help of every general practitioner, pediatrician and otologist. I refer to acute progressive deafness.

If the symptoms were more apparent in the early stages more attention would be paid to them. Almost all cases of progressive deafness have their beginnings in etiological factors which arise in early childhood. All too often irreparable damage has been done before the otologist is consulted. Is it not much better to know the causes of deafness and forestall their onset than to attempt curing a well established deafness? One cannot melt the scar tissue which has formed in the tube and middle ear by diffusing softening fluids into the tympanic cavities.

Too much emphasis cannot be placed upon the necessity of maintaining tubal patency under all conditions. All of us have experienced how stuffy the ears may become with a bad cold in the head. This is due to a slight inflammation of the tubal mucosa and a temporary let down in the function of the tubal muscles.

The stability of the mechanism of the middle ear depends upon an equalized air pressure behind and in front of the drum. If this equality is interferred with deafness may result. From stoppage of the Eustachian tube no air reaches the middle ear, the normal articulations between the ossicles are interferred with and what sound waves do reach the middle ear are not given the opportunity to be properly transmitted to the cochlea. Changes in the drum membrane take place at the same time. It has been satisfactorily proven that ninety per cent of cases suffering from defective hearing had the trouble start in the sound conducting mechanism.

A specific case will best illustrate the point. It is that of a child just recovered from measles or scarlet fever. The ears have discharged for a brief period and then cleared up. However his parents have noticed that his hearing is not as acute as formerly. Soon the child is ready to return to school. No hearing tests are made. It is noticed that the boy is not as attentive to his studies as formerly. The family physician is consulted and all too often tells the parents not to worry about the ears, that they will clear up with the return in muscle tone of the child. The hearing may remain stationary for a number

of years and a physician not be consulted. However, with the pathway once definitely established, repeated colds in the head frequently stop up his ears and in desperation an otologist is consulted.

Inflation of the tube by Politzeration, or the catheter, pneumomassage or the employment of the bougie may conserve that hearing still present or even restore a small amount. However treatment must be continued at regular intervals throughout life. The situation from the standpoint of the patient seems hopeless. He is automatically shut off from a great deal of the enjoyment of life and the fine arts. It is all the sadder because it is in most cases preventable.

Gentlemen, at your mercy, in your offices sit the hard of hearing of the next generation. I beg your interested consideration and help.

## NASAL COMPLICATIONS OF THE COMMON INFECTIOUS DISEASES*

Will R. Pryor, M. D.

Louisville.

Most of the exanthemata have nasal symptoms at the onset or they are a part of the symptom complex of the disease. The early coryzal manifestations are only of importance from the standpoint of complications which they may produce.

There may or may not be fever in the prodrom. In scarlet fever, nasal congestion may be associated with high temperature and prostration sometime before the rash appears. As a rule there is little constitutional reaction associated with measles before the rash. In diphtheria the throat symptoms usually predominate but nasal diphtheria should be held in mind. There may be a membrane in either the nose or nasopharynx. The membrane is nearly always bilateral, enlarged glands and a constitutional reaction distinguishing it from fibrinous rhinitis and rhinolith. A positive smear and culture are, of course, the final word.

The opinion of Dean of St. Louis, is concurred in by most prominent rhinologists. He states that the best preventative for sinus infection in children, at anytime, is an early and complete removal of all adenoid tissue. After its occurrence adenoidectomy is the first step in cure.

Given a case of scarlet fever or diphtheria our problem is mainly one of proper aeration of the sinuses. Ephedrine or Adrenalin in weak solution can be dropped in each nostril every two or three hours. A technique I have found most valuable is to have the head over extended, hanging over the edge of the bed, directing the end of the dropper parallel to the dorsum of the nose, thereby getting the medicine up the lateral nasal wall under the middle turbinate, exposing to the air recesses which act as ideal culture media for the bacteria. Once open Metaphen, Merthiolate or a combination of these with Ephedrine is used.

If sinusitis develops the opposed sides of one or both nostrils are separated by the shrinking solution on a piece of cotton, the procedure being repeated until cotton can be placed in the middle turbinate region. Aeration is followed by antiseptic drops. If necessary the antrum may be washed. If this treatment is begun early and persisted in more serious complications will generally be prevented. However the sinusitis may have already progressed too far before any treatment is instituted. There may be puffing and redness under the eye or the eye may be partially closed. This swelling may extend up over the frontal area or down over the antrum. The nostril on the affected side is entirely occluded. The patient often has a fast pulse, high temperature and is generally toxic. The x-ray is positive for either frontal or ethmoid and antrum.

I have had four such cases. In three of these, after complete shrinking of the nostril, I removed the middle turbinate, washed out the antrum and removed the adenoid. In the fourth the swelling was so tremendous that the mucous membrane could not be shrunken higher than the inferior turbinate level and some drainage had already taken place into the soft structures over the antrum before I saw the case. Accordingly a catheter was pushed up in the nostril and suction applied. It was not necessary to incise the mass over the antrum. All four of these cases recovered.

I would like to have the discussion include the reaction toward serum in the treatment and prevention of scarlet fever. I have seen most gratifying results from convalescent serum.

*Read before the Jefferson County Medical Society.

**Immunization with Tetanus Toxoid.**—Bergey observed that alum-precipitated tetanus induces, in a dose of 1 cc., a higher degree of immunity than three doses of the toxoid without alum. The tetanus toxoid is of value as a prophylactic agent against tetanus infection. It has no therapeutic value in persons who are infected with tetanus bacilli. Active immunization against tetanus infection should be carried out as follows: A primary stimulus is given by injecting a dose of 1 cc. of the toxoid; this is followed by a rest period of three months, and then a secondary stimulus of 1 cc. of toxoid is given. On injury, a third dose of 1 cc. of the toxoid is given.

# DIAGNOSIS; COMPLICATIONS OF COMMON INFECTIOUS DISEASES IN THE THROAT, AND CARRIERS OF THESE INFECTIONS AS RELATED TO THE NOSE AND THROAT*

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In time allotted to me I find it impossible to cover at all in detail, or even mention the many conditions that arise in the course of infectious diseases in relationship to the throat. I shall try to deal briefly with those most common, and in passing merely mention those less prevalent.

Scarlet Fever: The pharynx in this condition shows more or less involvement. There may be only erythema of the mucous membranes of the hard and soft palate, and the posterior pharyngeal wall. The tonsils are swollen as in lacunar tonsillitis. In severe cases the mucous membranes are a deep red, the tonsils and pillars covered with a thick, fibrinous, pseudo membrane and the uvula elongated and edematous. The patient complains of dysphagia and the breath is foul. Bacteriological examination of the exudate usually shows streptococcus pyogenes together with staphylococcus pyogenes and staphylococcus aureus and at times the Klebs-Loeffler Bacilli. The Klebs-Loeffer Bacilli if present show the scarlet fever complicated by diphtheria. Sloughing of the tonsils and pillars and soft palate, and peritonsillar abscesses may occur. Adenoids are acutely inflamed and the exudate may be present in the nasopharynx. The lymphatic glands of the neck are usually enlarged and they may suppurate causing pyemic symptoms and death. At times inflammatory edema of the tissues of the neck is noted with suppuration and gangrene.

The larynx is less involved than the pharynx and presents more or less the evidence of acute laryngitis. In severe cases there may be edema of the larynx. The epiglottis may be swollen and ulcers, usually superficial but occasionally deep, involving the cartilages have been observed. Paralysis of the soft palate and pharyngeal muscles, and consequent nasal twang and regurgitation of liquids through the nose may occur. Paresis or paralysis of the laryngeal muscles may leave the patient hoarse or aphonic for several months.

The source of infection are discharges of the nose, throat, ears and suppurating glands of an infected person. Such a person should be isolated until after all discharges have ceased.

Measles: At the onset of the sneezing and coryza Kopliek's spots may be observed on the mucous membranes on the inside of the cheeks, only visible in bright day-light. They are small, irregular rose colored spots with a very minute bluish speck in the center of the rose area. They may be seen on a level with the base of the lower milk molars on either side, and there may be eruptions scattered over the entire membranes of the mouth.

The Pharynx is hyperemic. The hard and soft palate shows small areas of deep, purplish red blotches separated by areas of less intense hyperemia, similar to the eruptions found on the skin. Hemorrhages in the congested areas may be seen. Follicular tonsillitis may be present. Rarely a thick pseudo membrane as in scarlet fever may be seen. Adenoids may be swollen along with the cervical glands.

The larynx is acutely inflamed but usually only to a slight degree. In severe cases there may be edema of the larynx, spasmodic laryngitis with croupy symptoms, and rarely ulcers, abscesses and perichondritis. Severe stomatitis, even gangrenous stomatitis and paratitis may occur.

In German measles the soft palate is hyperemic and slight, blotchy eruptions may be observed. The tonsils may be slightly swollen and there may be a follicular tonsillitis. Lymphatic glands are frequently swollen. The laryngeal findings are those of an acute laryngitis.

In measles the secretions of the nose and throat are the source of the infection, passed either directly or indirectly.

Chickenpox: In this disease the pharynx, inside of the cheeks, and tongue show typical lesions as found on the skin. They are, however, few in number and are by no means present in all cases. A hemorrhagic type of the disease has been described with cutaneous ecchymoses and bleeding from the mucous membranes of the throat. Here again the contagion is contained in the mucous membranes of the mouth and transmitted from person to person directly, and indirectly through articles soiled by discharges from the person suffering from the disease.

Influenza: The pharynx is intensely congested. The lymphoid tissue of the posterior wall and behind the posterior pillars is hypertrophied and the lymphoid tissue of the nasopharynx is much swollen. Various degrees and forms of tonsillitis may be present. Laryngitis is a constant finding and may be either mild or severe. Cough may be paroxysmal and productive of a profuse expectoration of

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thick, glairy mucous, occasionally blood stained. The laryngitis may be present for weeks. The disease may readily be transmitted as by sneezing, coughing, etc., as well as by direct contact, or through articles soiled by the nasal and throat discharge.

Diphtheria: This subject deserves much more detailed consideration than my time allows. In consideration of this subject I shall merely, in a brief way, mention the most common and outstanding features.

In the pharyngeal type of diphtheria the throat is sore and the glands at the angle of the jaw usually enlarged. Early the throat reveals a thin, faintly grayish membrane situated upon the tonsil, uvula, soft palate or posterior pharyngeal wall. At first the membrane on the tonsil may be in spots as in lacunar tonsilitis, but later it spreads, covering nearly all the free surface of the tonsil, extending to the pillars. The exudate is elevated above the surrounding mucous membrane and bordered by narrow zone of deeply congested mucous membrane the color of which is dark maroon or purple. This membrane is difficult to remove and when removed, leaves a bleeding surface, and rapidly reforms. In severe cases the margins of the membrane are blackish and have a gangrenous appearance. At the end of 4 to 10 days the membrane either gradually melts away or becomes loosened and curled up and is expectorated. No examination is complete in doubtful cases unless a culture from secretions of the throat are examined bacteriologically.

In the laryngeal type which is usually secondary to a primary infection in the pharynx, but which may accompany nasal diphtheria without pharyngeal involvement, a cough is first noted. It is also possible for the infection to be limited entirely to the larynx. A clear, distinct, hacking cough is reflex and found in the pharyngeal type. A dry cough with hoarseness shows involvement of the larynx. This cough becomes tight and croupy associated with dyspnea and cyanosis. The patient becomes aphonic. The accessory neck muscles of respiration become actively pronounced. The terminal condition of such a case is that of partial and that of complete laryngeal obstruction which may be readily determined. In cases recovering from the infection we may have paralysis and suppuration of the glands of the neck. Paralysis usually first affects the soft palate, liquids being regurgitated. The voice becomes changed, a nasal twang being present. The muscles of deglutition may be next involved and therefore altered ability to swallow. Such paralysis as described are usually followed by complete recovery. The glands of the neck may suppurate and this complication is usually fatal.

The sources of infection in diphtheria are of course dischages from the inflamed mucous membranes of the nose and throat either directly or indirectly, especially through the medium of food contaminated by a carrier.

Pertussis: In the pharynx of a Pertussis patient we find an acute pharyngitis. The membranes are hyperemic especially when the paroxysms of coughing are severe. Granular pharyngitis is common. There may be small hemorrhages beneath the mucous membranes of the soft palate, hard palate, tonsils and pharyngeal walls.

The larynx is congested and submucous hemorrhages are occasionally found. Thick, viscid, pearl-like mucus may be seen in the trachea. The lingual tonsil is often swollen. The tracheal and bronchial glands are enlarged. There is a constant lesion of the trachea with presence of bacilli between the columnar cells.

The source of infection is again from discharges from the throat and bronchial mucous membranes of an infected person and again may be passed either directly or indirectly.

Malaria: The pharynx and upper respiratory tract may be intensely congested and lymphoid tissue hypertrophied. Hemorrhages may occur from the pharyngeal and occasionally from the laryngeal mucous membranes. Neuroses of the pharynx producing dysphagia have been reported. There are also reported cases of neuroses of the larynx resulting in spasmodic coughing of a croupy character.

Mumps: Slight swelling is noted below the ear which increases gradually. In 48 hours there is great enlargement of the neck and side of the cheek. The swelling of the glands extend backward beneath the sternomastoid muscle. The other side becomes involved and the entire neck is surrounded by a collar of doughy infiltration. The submaxillary and sublingual glands may become swollen and the lachrymal glands may be involved. The patient may be unable to open the mouth, speech and deglutition being difficult. There may be an increase or decrease in the flow of saliva. The mucous membranes of the mouth and throat are usually inflamed with the sensations of pain, tension and tightness. Facial paralysis may result. Suppuration of glands is rare as is gangrene which may occur. The source of infection of mumps are secretions of the mouth and possibly of the nose, and again transmitted either directly by contact or indirectly

through articles soiled with the discharges from the nose or throat of the patient.

Glanders: The lymphatic glands of the neck are swollen, tense and hard. Later they break down and suppurate. The pharynx may be involved and the lips and tongue are often the site of the disease. In cases of this type there are small, firm, colorless nodular elevations on the parts involved. The nodules later become red and in a few days, yellow. They then break down and discharge pus to which the yellow color is due. The pus microscopically shows the specific bacillus malleus. The condition is exceedingly fatal, causing death in 2 to 10 days.

Smallpox: The eruption of smallpox is noted on the hard and soft palate, tonsil, pharyngeal wall and occasionally on the mucous membranes of the cheek, tongue and mouth, before it occurs on the skin. The number of lesions are usually small, from 6 to 12 except in the hemorrhage type of the disease in which case they are numerous and purpuric in character. In severe cases the tonsils may be enlarged and covered with fibrinous exudate, streptococcic in origin. In these cases cervical adenitis is present, frequently abscessing. The larynx is usually only slightly involved. In severe cases pox may exist on the epiglottis and even within the larynx, in which case edema of the larynx is apt to occur as are also ulcerations, which may involve the cartilage and result in sloughing and abscess of the neck. The sensibility of the larynx is lowered by the above processes and irritating particles may reach the lower air passages. Infection may be passed through direct contact or through articles soiled with discharges from the lesions as well as through urine or feces.

Erysipelas: In the pharynx there begins a sensation of pricking with difficulty in swallowing. The membranes are deeply red, dry and glistening. Small vesicles and large blebs appear on the soft palate, interior of cheek, tonsils and pharyngeal wall. The uvula is elongated and edematous and fibrinous exudate may be present on the tonsils. Inflammation involves the naso-pharynx. The glands of the neck become swollen, hard and brawny to the touch. In the larynx the disease begins with acute swelling of the membranes which become shiny in appearance. This is followed with hoarseness, dysphagia and dyspnea, the latter due to swelling in the ary-epiglottic folds and ventricular bands. Tracheotomy may be required to avert death by suffocation, and often, such a tracheotomy wound becomes infected.

Typhoid: The tongue is dry and covered with thick coating, cracks and deep fissures which often bleed. Acute glossitis may occur. The saliva is diminished. Parotitis may be present. The pharynx is dry, glazed and usually hyperemic, hemorrhages sometimes occurring. Paresis and occasionally paralysis of the muscles of the soft palate and pharynx have been noted, allowing regurgitation of liquids through the nose. The pharynx may be the seat of ulcerations or catarrh. The tonsils are deeply congested. Membraneous pharyngitis is a serious and fatal complication and may come on in the third week. Difficulty in swallowing may be due to ulcers of the oesophagus, and strieture may follow. Thyroiditis may occur with abscess formation with typhoid bacilli in the pus. Acute laryngitis is nearly always present. The lymphoid tissue is hypertrophied and ulcers of laryngeal surface of the epiglottis, ary-epiglottic folds, vocal bands and posterior wall of the larynx occasionally occur, the ulcerations may be deep involving perichondrium and cartilage, with destruction, abscess formation and edema of larynx. The submaxillary glands may at times be involved. The infection is easily transmissible through the medium of the sputum and it should for this reason receive the same care as that of a tubercular patient.

I regret that time will not permit me to go into the various local throat manifestations of many of the general systemic infectious diseases of which the following are the most common: Streptococcic sore throat; various forms of Septic pharyngitis, laryngitis and tonsillitis; Syphilis; Vincents Angina; Mycosis; tuberculosis and lupus; paratyphoid and typhus; pneumonia; cerebro-spinal fever and encephalitis; tetanus; leprosy; those diseases of fungoid origin; various forms of stomatitis, etc.

I wish to say in conclusion that in many of the infectious diseases the diagnosis, if in question, can be made early and definitely by the local findings in the throat.

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**Protective Action of Sodium Thiocyanate Against Dysentery Toxin (Shiga).**—Reid and his associates investigated the accidental discovery by Reid and Stubblefield Crandall and Anderson that dogs which had received thiocyanate from four to five weeks previously failed to react in the usual manner after receiving lethal doses of Shiga dysentery bacillus filtrate. They found that the intravenous (20 mg. per kilogram of weight) or oral (60 mg. per kilogram of weight) administration of sodium thiocyanate from fourteen days to several (four or five) weeks prior to the administration of a toxic filtrate of Shiga dysentery bacilli affords protection against the lethal action of the filtrate in some but not in all dogs.

# OPHTHALMOLOGIC SYMPTOMS AND COMPLICATIONS OF THE COMMON ACUTE INFECTIOUS DISEASES OF CHILDREN*

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Measles: The eye symptoms of measles are quite marked. In the early stages photophobia and increased lacrymation often arouse the suspicion of the true nature of the fever. These are due to an acute catarrhal conjunctivitis, caused by a toxic principle circulating in the blood. Ususally the conjunctivitis disappears of itself after two or three weeks without leaving serious consequences, however, if especially severe or attended by complications, these symptoms may continue long after the fever has abated.

During the acute attack of measles, the eyes should be protected from bright light, particularly direct sunlight; the room should be darkened permitting only as much reflected light as can be tolerated without pain. A mild antiseptic solution such as Argyrol 5-10 per cent, Neo Silvol 10-15 per cent or Merthiolate 1:5000 may be instilled into the eyes several times daily to prevent the conjunctivitis from becoming a muco purulent infection. No reading or use of the eyes for close work should be permitted until the symptoms of conjunctival infection have subsided. Judicious treatment and application of hygienic principles at this time will prevent many times distressing complications and permanent defects.

Complications: In exceptional cases the conjunctivitis may take on a blenorrheal aspect with a muco purulent discharge. During convalescence numerous hordeola or styes may develop.

The cornea is endangered in cases of more severe conjunctivitis and corneal ulcers may develop, sometimes resulting in hypopyon, perforation and panophthalmitis. This gloomy picture however is of rare occurrence.

Other rare complications affect the accomodation either as a spasm of the ciliary muscles, producing a transient myopia; or as an insufficiency of accomodation causing an unnatural premature presbyopia.

Errors of refraction which have not produced symptoms, frequently call for correction after convalescence.

Optic neuritis and infection of the lacrymal gland have been reported as unusual complications of measles.

Scarlet Fever: As a rule the eyes suffer but little in this disease, the usual accompaniment being a slight conjunctivitis, more of a congestion than an inflammation and calling for little treatment other than hygienic measures and careful observation.

In the presence of purulent retinitis a severe conjunctivitis may develop, and infection of the lacrymal duct and sac may be produced.

Keratitis may take place in subjects of low vitality, of the so-called scrofulous or tuberculous diathesis. Ulcus serpens with perforation and panophthalmitis has been reported. Pernicious keratomalacia with panophthalmitis and death is a rare complication.

Purulent metastatic choroiditis as a result of septic material lodging in the uveal tract causes a serious intraocular infection which may end in phthisis bulbi.

Renal retinitis (albuminuric) is seen as a sequel to severe nephritis. Usually both eyes are equally and simultaneously affected. If the patient recovers, complete disappearance of the retinal lesions and restoration of function usually results.

Optic nerve lesions, papilledema, are often seen when brain complications result from middle eye lesions.

Other rare complications are: Exophthalmus as a result of infiltration of the cellular tissue of the orbit.

Retrobulbar phlegmon, metastatic orbital cellulitis, especially when there is empyema of the nasal accessory sinuses. This frequently is fatal.

Optic neuritis or neuro-retinitis may result from severe toxemia—uremia.

Temporary amblyopia without demonstrable intraocular pathology has been reported.

Influenza: All of the ocular structures may be involved by this bizarre disease, but none are sufficiently constant to render them typical of it. Hence such ocular findings as are present in a case of influenza may be considered as complications rather than true symptoms.

Conjunctivitis is frequently present and in many instances caused by the influenza bacillus.

Herpetic keratitis is seen more frequently in influenza epidemics than in any other febrile disease. If neglected it may cause large corneal ulcers and the disastrous results from perforation and panophthalmitis.

Metastatic intraocular infections may take place either in the form of ordinary plastic iritis or a metastatic ophthalmia with a suppuration in the uveal tract or destruction of the eye.

Various retinal involvements are seen:

(1) Hemorrhages resulting from damaged

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vessel walls from altered composition of the blood.

(2) Thrombosis of the central retinal vein has been reported.

(3) Psuedo nephritic retinitis (retinitis stellata), presenting the characteristic star figure at the macula, but not due to nephritis and without discoverable cause. It is accompanied at times with optic neuritis.

Involvement of the ocular muscles not infrequently occurs:

(1) Intrinsic, there may be insufficiency or paralysis of accomodations, with or without mydriosis.

(2) Extrinsic, acute ophthalmoplegia, as a result of the toxic effect on the nuclei.

There may be orbital infections such as a purulent tenonitis or an orbital cellulitis. It has been observed in great influenza epidemics that febrile diseases of this sort may determine an attack of acute glaucoma.

Following an attack of influenza the patient may be so run down that errors of refraction produce symptoms which require correction by glasses.

Diphtheria: True diphtheria conjunctivitis fortunately is exceedingly rare. We might expect it to be of frequent occurrence in children who can so easily carry infection by means of their hands from the nose or mouth to their eyes, but in this disease conjunctivitis of a non-diphtheritic nature is much more frequently seen than the specific form. When diphtheritic conjunctivitis does occur it is a formidable complication, the resulting inflammation being the most intense of any that are observed in the conjunctiva. The milder form of this affection—superficial or croupous—may subside without leaving any permanent changes in the conjunctiva; but the deep form is much more serious and leads to trichiasis, cicatrical entropion or even exophthalmus. Corneal ulceration is much more apt to occur and adds to the gravity of the prognosis.

The ocular lesion most frequently met with in diphtheria is the partial or complete paralysis of one or, what is more usual, of both ciliary muscles. This causes loss of accomodation and totally disables the eyes for all close work. It may be, though usually is not, accompanied by mydriosis. It usually supervenes during convalesence, persists for several weeks and finally disappears. Strong convex glasses to supplement the inactive lens are necessary for near work as long as the accomodation is suspended.

The external ocular muscles likewise may be involved in post-diphtheric paralysis, and paradoxically it is the external rectus, supplied by the 6th nerve and not one of the group innervated by the 3rd, which is most often affected. This paralysis is usually of short duration, not more than a few weeks, although I have observed one case in which it was still present after more than 20 years.

Ptosis has been reported a few times.

Rare complications are metastatic purulent choroiditis and optic neuritis.

Whooping Cough: Not infrequently, due to the congestion of the ocular tissues by the spasmodic cough and the violence of the effort, the sclera of both eyes may become deeply suffused with blood, occasioning some alarm to the parents. However the hemorrhage is only sub-conjunctival, quite harmless and completely absorbed in a short time.

More rarely a retinal hemorrhage may occur and produce some visual defect.

Exophthalmus from an orbital hemorrhage is a very rare happening.

Mumps: Ordinarily the eyes are unaffected in this disease. Rarely, by an extension of the infective process to other glandular structures such as is observed more commonly in the testicles, the lacrymal glands may be affected and pronounced swellings appear under the outer portion of such orbital ridge. Fuchs states that iritis may accompany this extension of the infection to other glands.

Chickenpox: In exceptional cases eruptions may be found in the palpebral conjunctiva. Conjunctivitis of a mild severity occurs in a small percentage of cases.

## DISCUSSION

**Lee Palmer:** I wish to emphasize the fact that in dealing with infectious diseases in children we should keep the likelihood of complications in mind at all times. In many instances a child will present no evidence of any complication, and over night will develop a running ear. Older children will tell you when they have a little pain in the ear but in dealing with children from one to three, and sometimes four or five years old, they are unable to localize the pain, and in such cases it is necessary to be constantly on the lookout for eye, ear and throat complications.

A great deal has been said tonight about three diseases in particular, diphtheria, scarlet fever and measles. The local symptoms of these conditions have been fully described by two of the essayists and Dr. Pryor has asked that the question of serum reaction be discussed.

In the first place if you are suspicious of diphtheria, even in a child that has scarlet fever, do not wait 16 to 24 hours for a culture—if you are really and truly suspicious of diphtheria, that is sufficient indication for the use of diphtheria antitoxin.

The reactions from scarlet fever serum and diphtheria antitoxin are much the same. Never

give the patient serum without first inquiring into the family history, whether any member of the family has any of the allergic conditions, such as asthma, eczema, hay fever, etc. Then you will always have time to do a simple test before giving the serum, either putting one drop of the serum into the eye or doing a scratch test on the skin. In the eye test, if the patient is sensitive to the serum, the conjunctiva will be definitely reddened in 15 to 20 minutes. If the skin test is used, put one drop of serum on the skin and then barely scratch it, not deeply enough to draw blood, and then watch for the red wheel formation within 10 to 15 minutes. If the tests are negative you can be reasonably sure that the patient is not sufficiently sensitive to the serum to produce anaphylaxis or immediate death. These tests, however, will not guard against serum sickness, which may occur five to seven days later, and is characterized by fever, joint pain and other symptoms of that type. Serum sickness, while very aggravating and painful to the patient and annoying to the doctor, does not endanger life. This is true with respect to both scarlet fever serum and diphtheria antitoxin.

In severe cases of scarlet fever I believe the use of scarlet fever antitoxin is indicated, but only in severe cases is it recommended. It causes considerably more reaction than does diphtheria antitoxin and the serum sickness which follows in three to five days is more severe.

Another point. If immediate effect is desired and the tests mentioned are negative, the serum may be administered intravenously and its effect will be produced in about twelve hours. Administered subcutaneously, there is no effect for twenty-four hours, so there is little excuse for subcutaneous use. It can be given in the peritoneal cavity, well diluted with saline, and will be effective in about six hours.

Also bear in mind that we have convalescent serum and that it is doing wonderful work in preventing measles. Whether you have an epidemic of measles or a sporadic case, especially in a child in which you are afraid of complications of which bronchial pneumonia is one of the foremost, give that child 5 to 15 c. c. of convalescent serum and you do not need to fear it. It is made from human blood and can be administered intramuscularly without severe reaction. This will either prevent measles altogether or, what we would rather do, protect the child by permitting it to have a mild attack of measles and thus establish an immunity that will, we hope, last the rest of its life.

**Adolph O. Pfingst:** Several thoughts came to me while I was listening to this interesting and enlightening discussion. I could not help but think of the infrequency with which we see eye and ear complications of the acute infectious diseases of childhood as compared to the period in which I began to practice medicine in Louisville. We must infer that either there are actually less complications of these disases or the diseases themselves are less frequent. In either case it is a tribute to the profession that is looking after the children or to those interested in preventive medicine. In former years I saw many cases of eye diseases occurring during or immediately after one of the exanthematous diseases. In those days in addition to the complications of measles, scarlet fever, diphtheria, it was not uncommon to see cases of corneal ulcers and conjunctival pustules resulting from small pox. Perhaps of all the infectious diseases, measles affects the eye most frequently, however, I am inclined to believe that the complications are not nearly so frequent as one is led to believe. As many conditions are blamed on the menapause in women undergoing the change of life, so we find the lay people, and I believe I might include the medical profession, blaming measles for many conditions of the eyes such as squint, high degree refractive errors, blepharitis, phlycentular disease, trachoma, etc., and other conditions which occur independent of the disease. The most frequent ocular disturbance found in measles is an acute conjunctivitis. This comes on nearly always some eight to ten days before the skin eruption appears, and subsides as a rule in eight to ten days after desquamation. It has always been my understanding that the conjunctivitis observed in measles is due to a blood borne toxin or virus affecting the sub epithelial structures. It is associated with a watery or at times with a slightly mucoid secretion. In this and in the time of its occurrence it may be looked upon as a sign of differentiation between measles and scarlet fever, the discharge in scarlet fever coming on later and its character being of a mucopurulent type.

The mucous membrane of the middle ear is evidently affected in a similar way in measles as is the conjunctiva. A few years ago I read the report of a large children's hospital in Berlin. All of the children who had died of measles and its complications, and there was a large number, were subjected to post mortem examination, the middle ear being studied in every case. Without exception the middle ears of these children were filled with a thick secretion made up largely of leucocytes and serum, indicating a low form of middle ear inflammation. As the eustachian tubes were normal in most cases, the secretion was believed to result from an autogenous virus or toxine infection. These pathological findings would hardly confirm Dr. Pryor's theory that practically all middle ear complications of the exanthematory diseases are due to the presence of adenoid structure in the naso-pharynx.

Scarlet fever has always been a treacherous disease on account of the liability of involvement

of the middle ear and the kidneys. The otitis of scarlet fever is usually one of mixed infection, hence the greater probability of bone involvement in these cases. As oculists we see cases of neuro-retinitis secondary to the renal disease and an occasional case of papillodema in cases of meningeal involvement. The conjunctivitis of scarlet differs from what we see in measles in that it is as a rule of a muco purulent character, and as it occurs by extension from the nose it comes on after the primary disease has fully developed.

Primary diphtheria of the eye is very infrequent. I have seen a single case. The ocular cases resulting from diphtheria that come under the observation of the oculist are those in which either the intrinsic or the extrinsic muscles are paralyzed. Dr. Townes has told us that the intrinsic muscles are most frequently involved. Statistics show that in almost half of the cases of post diphtheritic paralyses the muscles of accomodation are affected, this bringing about an inability to read or to do other close work. The external ocular muscles are involved with just about half the frequency of the intrinsic muscles. The abducens is most frequently involved, next the oculo-motor. Recovery nearly always follows in four to eight weeks.

**M. C. Baker:** Relatively speaking, I believe the general practitioner sees more acute throats than does the specialist. Very seldom nowadays does the specialist see a case of diphtheria, scarlet fever or measles in its incipiency, although he is often called in to corroborate the diagnosis or to differentiate some of the more unusual conditions such as atypical tonsillitis, Vincent's angina, or an occasional case of lues or malignancy. We are also called upon to treat complications, especially of the acute type, such as intractable conjunctivitis, corneal ulcer, hemorrhage of the retina, etc. Again, we are called in cases of sinusitis, particularly where there is severe reflex pain from the sinus. Also in the more chronic type of complications. These, I believe, are the most important and the sooner the specialist is called in such cases, the more help he can give the internist. For example, in cases of deafness, if we see the case in its incipiency there is more likelihood of improving or restoring the hearing. I recently saw two cases of complete nerve deafness in children following mumps which had occurred one to three years previously.

We are called upon in cases of sinusitis that get into the chronic stage, with recurring discharges of pus into the nose, occasional pain, etc. To my mind such cases are dangerous to the community in that they are the ones that start the epidemics. In other words, they carry the influenza bacillus, bottled up in the sinus, from one season to another, from fall to winter and from winter to spring, and that is when these epidemics are started.

Again, we are called upon to treat carriers. Oftentimes we find diphtheria bacilli carried in the tonsils and no means can be found of relieving them except by removing the tonsils.

In conclusion, just a word about what we call missed cases, which are often responsible for epidemics. To illustrate, a few days ago I was called to see a child of ten, who had an acute streptococcic throat. There were a number of cases of scarlet fever in the school which he attended, but this child was Dick negative. I have seen him each day and he has never had any rash or any other symptoms of scarlet fever. I do not believe he has it but I do believe that he would be capable of giving scarlet fever to another child.

These missed cases are most dangerous, especially in adults, because they are so hard to control. They do not feel sick and they want to go on with their daily occupation. Children are more easily controlled. I expect to keep this child out of school three or four days longer than I would an ordinary case of sore throat.

**J. Kenneth Hutcherson:** Having had about six years of general practice before taking up special work I am deeply interested in this subject from both viewpoints. When I think of the eye complications that arise in these infectious diseases, I am more than ever convinced that the eye cannot be divorced from general systemic conditions. In the majority of instances the internist is the first to see these cases and the ultimate outcome, whether good or bad, rests in his hands.

Most of the complications that have been enumerated tonight are those that we meet with every day. One form of conjunctivitis that is not often seen but which may be very confusing when it does occur, is what is known as Parinaud's conjunctivitis, involving usually only one eye. The eye is red and the pre-auricular glands are swollen and sometimes there is elevation of temperature as high as 104 F. However, it quickly subsides without any serious consequences.

Speaking of paralysis of accomodation in diphtheria, there is one complication that the internist sometimes sees which the specialist does not; that is, paralysis of the muscles of the leg, with ankle drop, occurring some two or three weeks after the attack of diphtheria. It usually clears up promptly, although it may last quite a long time.

Another complication of ear conditions that we occasionally see is diplopia. Sometimes it is the first symptom noticed. The patient in complaining of diplopia and upon examination nothing can be found in the eyes to account for it and upon going into the history, the individual will tell you of having had a running ear over a period of two or three weeks or longer. This is known as Gradenigo's symp-

tom-complex, which is paralysis of sixth nerve on the affected side.

As to deafness, I did not know that the percentage of people suffering from deafness was as high as has been quoted here tonight. Of course, many people suffering from deafness are sensitive about it and try to hide it. In many instances it might be at least alleviated by proper care and treatment. The first thing to do is to ascertain the cause of the deafness and remove it if possible. All possible foci of infection should be eliminated. Sometimes there are maladjustments. For example, the dentists have worked out an interesting theory in regard to the "bite." In some individuals the lower jaw is pushed forward, the effect being to produce a change in the auditory canal which affects the hearing. There are people in this city today who can testify that a change in the "bite" has improved their hearing at least fifty per cent.

Some middle ear conditions are very difficult to clear up, because very often the individual has a sinusitis with pus continually draining into the Eustachian tube. In such cases free drainage should be established.

Quite frequently upon looking into a child's throat and finding enlarged tonsils, tonsillectomy is advised, but if the tonsils are small they are not disturbed. As a matter of fact, some of the smaller diseased tonsils are the most dangerous. As Dr. Pryor has pointed out, adenoids may cause more trouble than the tonsils and are more apt to lead to complications.

**James W. Bruce:** Dr. Pryor said he would like to have an expression of opinion as to the use of convalescent scarlet fever serum. In my experience the use of this serum has been very gratifying; the trouble has been in getting it when you need it. No tests are necessary unless it is to be given intravenously, in which event the test for agglutination should be made. Given intramuscularly it is very effective and the only reason it is not more widely used is that it cannot be readily obtained.

Ephedrin is a drug that, in my opinion, is used more than it should be, especially in children. While it has a temporary shrinking effect, the congestion in the end is worse than it was before. Ephedrin should be used by the doctor in his office and if he writes a prescription for it, the patient should not know what it is. Telling the patient to get some ephedrin and take it every three or four hours may be followed by rather disastrous results.

The relationship between adenoids and otitis media is, I believe, a very close one. I have always felt that two attacks of otitis media, or even one severe attack—was an indication for the removal of adenoids. Certainly a child without adenoids is much less liable to have otitis media.

I would like to emphasize the point made by Dr. Pryor in regard to early paracentesis in otitis media complicating measles or scarlet fever. It seems to me that it is courting danger to allow it to go on for any length of time without opening the drum, because mastoid or other involvement when it does develop under such circumstances is exceptionally severe. This also brings up the question of early paracentesis in otitis media complicating such conditions as pneumonia, for example. I am inclined to believe that here also early opening of the drum is indicated.

Ten years ago very few doctors carried electric otoscopes as a part of their every-day equipment, but now ninety-five per cent of medical students have them and know how to use them. The instrument does not take up much room and no practitioner should be without one.

I have always felt that whooping cough is one of the meanest conditions that a child can have before the age of five. During the past five years Dr. Sauer of Illinois has been working in his own laboratory on a vaccine, and he has reported a series of five hundred cases treated with this vaccine with almost one-hundred per cent immunity. It is now being put out by one of the drug houses and should come into general use, being given to children 10 to 14 months old just as we are now giving diphtheria toxoid.

**J. H. Hester:** I merely wish to emphasise a few points that have been brought out in the discussion.

In diphtheria, scarlet fever and measles we all know that complications are dangerous and that the after effects are some times very serious. I want to stress the point made by Dr. Pryor that the earlier the specialist is called in these cases the better chance there is of benefitting the patient. We see so many of these patients too late.

Dr. Pfingst pointed out the fact that the number of complications is apparently decreasing. There is hardly any doubt about that and I believe it is due to the fact that the average general practitioner knows better how to care for these patients than he formerly did, in looking after the nose and throat and keeping the nose open by means of antiseptic sprays or nose-drops.

Like one of the other speakers I distrust ephedrin. It is used and abused much too freely and I believe is the cause of more hypertrophied conditions and other nose troubles than any other drug we have. In acute infectious diseases I prefer to use neo-silvol or some other silver solution. It shrinks the mucous membrane more permanently than ephedrin and I believe does more good.

Eye complications in infectious diseases are very few. As Dr. Pfingst said, many patients that we treat for eye conditions in later life will say that they had an attack of measles as

a child and their eyes have been bad ever since. As a matter of fact, in ninty-nine cases out a hundred the measles had nothing to do with it.

The most important complications are running ear and deafness. A running ear that lasts more than two weeks is one that should be taken care of by the specialist.

**Virgil E. Simpson:** There has been a strange misconception as to the action of adrenalin chloride and its later substitute, ephedrin, for many years. I have repeatedly heard the statement made on the floors of medical societies, by specialists including general surgeons, that the use of adrenalin chloride is followed by a reaction which tends to encourage subsequent hemorrhage. That is not true. Any one who has had the opportunity or taken the pains to do any laboratory work on animals with adrenalin chloride, will understand that it is not true; any one who knows what the drug does and how and where it acts will also understand that it is not true.

As an illustration: One may inject adrenalin chloride into the vein of a dog after having ligated, say, a fore-leg thus cutting off the blood supply, and watch the spectacular rise of the blood pressure and its equally spectacular recession, and then wait an hour and remove the ligature from the fore-leg and get the same sort of an effect in the leg which had been temporarily cut off as in the balance of the body, thus demonstrating that there is no loss of responsiveness on the part of the sympathetic nerves which are affected by the adrenalin chloride, because, having watched the effect subside, one can repeat the procedure and get the same effect and can do it many times over.

As to the use of serum in scarlet fever, it has been my fortune during the past few months to have had occasion to study, to some extent, the literature of scarlet fever serum, because we are confronted with the question of its admission to the U. S. Pharmacopoeia.

There are several things in connection with scarlet fever itself, as well as the serum, which have not been definitely settled. In the first place, we are not certain that the cause of scarlet fever has been definitely isolated. It has not been so very long since scarlet fever was reckoned a virus-produced disease, along with measles, polio, etc. The cultural characteristics and morphological appearance in laboratory studies have not been sufficiently definite to satisfy all competent observers.

In the second place, scarlet fever, so far as the eruption is concerned, presents some peculiarities. Some very creditable work has been done and reported in the literature during the past three or four years, which appears to establish the eruption in scarlet fever as being an allergic phenomenon. If that is true then we can understand why the serum, while apparently relieving the severity of the symptoms, does not seem to protect the individual against complications which, after all, give us most concern.

It is singular, when one stops to think of it, that nearly a quarter of a century has elapsed since scarlet fever was first successfully treated by serum and that at the present time there are three different methods of manufacturing it, each asking for the favor of the doctors who are standing on the side-lines trying to decide what to do about it

I do not consider the question of scarlet fever serum as settled by any manner of means, nor that the finding of an antitoxic substance in individuals that have or have not had scarlet fever is sufficient to warrant the dogmatic statements that have been made regarding the use of the serum. It is somewhat singular that children when first born and during the first two years of life do manifest a rather striking degree of immunity to scarlet fever, and it is likewise singular that a rather large percentage of these children are born of mothers who are also apparently immune to scarlet fever. On the other hand, it rather interesting that in many of these individuals considered to be immune to scarlet fever the antitoxin has not been found and, contrariwise, that cases have been observed in which the individuals in whom the antitoxin was present have developed what was clinically demoninated as scarlet fever. I am not sure that what we think of as the streptococcic group is not the same that, in one instance with a certain form of organism produces what we call erysipelas, in another instance streptococcic sore throat and in still another instance child-bed fever.

So, it seems that we are not yet ready to accept scarlet fever serum as a therapeutic asset. I am glad to have heard these expressions of opinion, because that is what our committee is interested in at the present time.

**H. E. Richey:** Regarding the use of nose-drops in preventing ear complications in infectious diseases, about two and one-half years ago during an epidemic of measles, in which we saw an average of 15 to 20 cases a day, we used nose-drops routinely and I do not recall a single complication occurring within six months, except one case of spasmodic laryngitis.

**Will R. Rryor,** (in closing): Nose-drops certainly help in preventing complications. One child with adenoids may develop ear complications while another will not, but the use of nose-drops will tend to prevent it.

In regard to Dr. Pfiingst's remarks, it may be interesting to know that in a series of autopsies carried out at the General Hospital in Vienna, over a period of a year, on infants who had died of various diseases, seventy-five per cent were found to have pus in the middle ear.

I agree with Dr. Bruce as to early paracentesis in otitis media complicating pneumonia. While it will not cure the pneumonia, still it moves one obstacle to the recovery of the patient.

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## BROMODERMA, REPORT OF A CASE COMPLICATED BY PREGNANCY*

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Cutaneous manifestations following the ingestion of bromides are not infrequently encountered. The ability to diagnose and successfully treat such cases, however, is not as well recognized as it should be. These facts, plus certain unusual features in a patient recently under observation, prompted the reporting of the following case.

Case Report: M. H. R., age 20, a seven and a half months gravid female, was referred to me by Dr. Silas H. Starr October 9, 1933. Her chief complaint was sores on the right leg. History revealed the fact that the first week in September she began taking Peacock's bromides, 1 dram t. i. d. for nervousness, and calcium for her pregnancy. Two weeks later she noticed a blister on the left arm which itched considerably. This disappeared in a few days leaving a hyperpigmented, atrophic scar. About the same time a similar lesion was observed on the right leg just below the knee which continued to enlarge and exude a moderate amount of pus. This was very tender and moderately pruritic. Two or three days prior to her visit, she noticed a similar lesion just below the first one. She had also observed two or three inflammatory, painful nodules on her legs.

Past History: History revealed the fact that the patient had occasionally taken Bromoseltzer with no ill effects.

A year previously the patient had eclampsia at which time she delivered a premature (seven and a half months) still-born baby. At this time there was a moderate nitrogenous retention in the blood. Following delivery, however, the blood chemistry and urine returned to normal and the symptoms disappeared.

Examination: The patient presented a few atrophic scars associated with hyper-pigmentation on the forearms—apparently the result of previous lesions. In addition, she presented a glass pinhead sized thick-walled, vesico-pustule on the anterior surface of the right leg. Just above this was a hickory nut sized, hypertrophic, granulomatous inflammatory nodule, the central portion of which was verrucous, depressed, and from which some sero-purulent discharge was exuding. The periphery of the nodule was covered with a shiny epidermis underneath which could be felt small nodules from which a great deal of pus could be expressed (Fig. 1). Several hickory nut sized, tender, inflammatory, subcutaneous nodules were noted on the lower portion of both legs. The rest of the physical examination was negative excepting the usual findings associated with a normal seven to eight months pregnancy.



Fig. 1. Verrucous and granulomatous bromoderma. Note numerous small follicular pustules in the vicinity of the nodules.

A tentative diagnosis of bromoderma was made and the urine tested for the presence of bromine. This was positive. In spite of this, repeated cultures and microscopic examinations were made in order to rule out a blastomycosis. The results of these examinations were negative.

Laboratory Data: Urine: Renal concentrations tests were normal; there was normal excretion of body chlorides; no trace of sugar or albumin; and repeated tests for iodide were negative. Blood studies revealed a moderate secondary anemia; the differential

*Read before the Jefferson County Medical Society.

count was normal; and a Wassermann test was negative.

Treatment and Course: The patient was instructed to discontinue all bromides and was given 50 cc. of intravenous physiologic saline and told to take one teaspoon of salt in water three times a day along with as much salt with her meals as palatable. She was given 200 R units of unfiltered x-ray to the granulomatous lesion below the knee on the right leg and was instructed concerning the use of boric compresses. In addition, she was given a 5 per cent ammoniated mercury ointment to apply locally.

The patient was next seen five days later (October 14, 1933) at which time new pustules were noted and the verrucous nodule was growing rapidly. One of the pustules previously noted had become papillomatous and was increasing in size very fast. X-ray was given (150 R units) to some of the other lesions and 50 cc. of intravenous saline again administered. The patient was seen two days later, at which time 150 cc. of intravenous physiologic saline was given along with further x-ray to various lesions. The urine still revealed the presence of bromine, and microscopic examinations and cultures were negative for blastomycetes. The patient decided to enter the hospital because of the inconvenience of home care and the slow response to therapy.

Hospital Course: New lesions continued to develop and the older ones, instead of involuting, became verrucous and granulomatous. Intravenous saline was continued at three to four day intervals along with a high salt diet. Thinking that possibly the therapy was forcing bromides out too fast, the intravenous saline was discontinued and the patient placed on a normal salt diet for a few days. New pustules continued to develop. Because of the resistance of the lesions to intravenous saline, the possibility that she was still taking bromides was entertained, but after investigations, was soon discarded. Finally, however, on October 28, 1933, it was discovered that the "calcium" she had been taking was Peacock's bromides of which she had been getting one dram (15 grains of bromine) t. i. d. since September. She had brought this prescription with her to the hospital and had been allowed to continue with it. This, of course, was immediately discontinued. She continued, however, to develop new lesions for two weeks, the extent of which may be seen in Fig. 2. Intravenous saline and a high salt diet were again started along with x-ray and although the lesions involuted slowly, no striking improvement was noted until a few days following delivery, which was November 21, 1933. From this time on, no new lesions appeared and the older ones, showed rapid retrogression. The patient was discharged from the hospital on December 3, 1933 at which time all of the smaller lesions had healed and the larger ones were inactive but covered with a thick dry crust. The patient was last seen on February 21, 1934 at which time the only cutaneous sequelae were atrophic, hyperpigmented scars.

Discussion: Iodides and bromides produce such similar cutaneous eruptions that often the correct diagnosis is only established after prolonged study including history of ingestion of the drug, chemical analysis of the urine, or even occasionally by a therapeutic test. Every physician is familiar with the usual type of eruption produced; namely, iodide and bromide acne. This is brought about by a hypersensitivity to the drug and usually follows small ingestions. The bizarre eruptions including the bullous, verrucous, papillomatous and granulomatous types, on the other hand, are usually the result of excessive single doses or prolonged administration of small amounts. With an unusual susceptibility, however, the latter may follow the taking of small amounts of the drug.

For some unknown reason the verrucous and granulomatous type of lesions show a special predilection for the anterior aspects of the lower legs, although they may occasionally occur elsewhere.

Evolution and Involution of Individual Lesions: We were particularly fortunate in being able to observe the progression and retrogression of individual lesions in our patient. The primary lesion was a pinhead size follicular, turbid-vesico-pustule. This gradually enlarged and the pustular element became more evident. At this stage, however, the pus is more apparent than real and if one punctures the lesion, only a small amount of purulent material will be obtained. Soon there develops along side of this pustule other similar ones. These increase in size very rapidly and become confluent. The lesion next becomes papillomatous, the central portion of which appears depressed and verrucous, whereas the periphery is raised, everted, and covered with an irregular thin, shiny epidermis. This border is studded with deep miliary pustules which at once become evident with deep pressure about the lesion. The nodules at this stage are markedly tender and are surrounded by an inflammatory halo. An important characteristic of this type of bromoderma is its rapidity of development. Pinhead sized pustules have been seen to develop into quarter-sized papillomatous and granulomatous nodules in five to six days.

The involution in this type of lesion is

very slow, often requiring weeks and even months, although small pustules may disappear over night under proper therapy. The first sign of involution is the disappearance of the pain and tenderness and with it the inflammatory halo. There then follows a gradual drying up of the lesions with a rather noticeable flattening out, often so deceiving that one believes the area to be enlarging. This is followed by a soft dirty candle-grease-like covering which in turn is followed by thick tightly adherent crust formation and epithelialization from beneath. Following the disappearance of the crusts there always remains scarring (usually atrophic) and hyperpigmentation which with time becomes less and less evident.

A very interesting phenomenon is that occasionally new lesions may develop and old ones become larger for days after cessation of administration of the drug. This was definitely observed in our case and is illustrated in Fig. 2. The probable explanation of this will be discussed later, but is no doubt due to bromide retention in the tissues and slow excretion.



Fig.2. Same case as Fig. 1 taken 15 days later and after all bromides had been discontinued. Note that although the lesions have increased in number and size, they are commencing to involute.

Diagnosis: The cutaneous lesions for which this type of bromoderma are usually mistaken are blastomycosis, syphilis, tuberculosis, verrucosa cutis, and carcinoma. With careful history, examination, biopsy, and laboratory tests, each of these can be eliminated. Blastomycosis usually offers the most difficulty. There is no question but that a warty-granulomatous growth with peripheral miliary pustules means blastomycosis until proven otherwise. In the above case, however, the rapid evolution of the lesions, the marked tenderness, the finding of small follicular pustules in the vicinity of the nodules, along with the failure to demonstrate blastomycetes, and a positive bromide test on the urine, clinched the diagnosis.

Another interesting feature in this case is the associated erythema-nodosum-like lesions present over the lower legs. Similar findings have been observed by Goeckerman, and others. There is no question but what these were also cutaneous manifestations of the patient's reactivity to bromides because we were unable to demonstrate foci, tuberculosis, or any other etiological agent to account for these lesions. In view of these findings, it would seem worthwhile in the future to examine the urine for bromine in all cases of unexplained erythema nodosum.

Test For Bromine in the Urine: The test for bromine in the urine is so simple and yet so little known that we believe it worth reviewing in detail. Dr. George H. Belote of the Department of Dermatology and Syphilology at the University of Michigan is responsible for the modification and practical application of this test originally found in Fresnius' text book on chemistry.

The basis of the test is the transformation of fluorescein into eosin in the presence of bromine. Strips of filter paper are soaked in a saturated solution of fluorescein in 60 per cent acetic acid and allowed to dry. These may be kept indefinitely for future use. A few crystals of potassium permanganate are added to approximately two-thirds of a test tube of urine. This is slightly agitated and a few drops of concentrated sulphuric acid added. The yellow fluorescein paper, after moistening slightly with 2 per cent acetic acid, is held over the mouth of the tube. If free bromine is present, it is given off and changes the yellow paper to a bright pink.

This test is unusually sensitive and bromine has been detected in various body fluids including sweat, saliva, blood serum, gastric contents, and cerebrospinal fluid in dilutions varying from 1:40,000 to 1:200,000. Chlorides seem to render the test more sensitive and it is not interferred with in the presence of iodides.

Patch Tests: Contact tests were done, employing a stock solution of Peacock's bromides as well as a saturated solution of sodium bromide. Both tests were negative.

Treatment: Wile has shown that ingested bromide passes through the renal epithelium with difficulty, and that bromide salts are

therefore stored in the tissues of the body. Bromide ion displaces the chloride ion in the body and therefore ingestion of the former leads to rapid elimination of the latter. On the basis of the above, he devised a very rational treatment for bromide intoxication; namely, the intravenous injection of physiologic sodium chloride along with a high salt diet. This replacement of bromides by chlorides usually immediately favorably influences the symptoms of bromism; notably, those involving the nervous and cutaneous system. Wile warns against the too rapid elimination of bromides because of renal irritation. The initial dose should not be more than 100 to 150 cc. If this is well tolerated, this may be increased to from 300 to 400 cc. twice weekly.

In most cases, bromodermas melt away under the above therapy like syphilitic lesions do under arsphenamine. Not infrequently, however, new pustules may develop under active treatment but these usually rapidly disappear. Occasionally, in spite of treatment, bromodermas end fatally. Bloch and Tenchio recently reported such a case.

We believe that the resistance to therapy in our case can best be explained upon the pregnancy and its effect upon the circulation of the lower extremities, as well as upon the very large amount of bromides ingested (200 grams in seven weeks) over such a relatively short period.

This is substantiated by the much more rapid involution of lesions following delivery, as well as by the fact that the few pustules which developed upon the upper extremity disappeared rather rapidly and none of them became granulomatous.

Our first explanation of the resistance of this case was that, due to her pregnancy and former eclampsia, there was some kidney damage thus accounting for a retention of bromides. However, this theory was abandoned after it was found that renal concentration tests were normal and that there was normal excretion of body chlorides. We also harbored the idea that bromides were being stored in the amniotic fluid. This would not be an unusual speculation since there have been cases reported of congenital bromoderma, placental transmission, etc. (Langer and Costello). At delivery, however, this fluid was tested for the presence of bromides and was negative. It should be noted, however, that at this time most of the bromides had apparently been eliminated because it was with difficulty that even a trace of bromine in the patient's urine could be detected. The cord blood was also faintly positive.

Perhaps second only to intravenous saline, a high salt diet, and forcing of fluids, is the judicious use of the x-ray. It is perhaps of little if any value in the small superficial pustules but is most useful in hastening involution of the verrucous and granulomatous nodules.

In addition to the above general therapy, local treatment consisting of wet dressings should be employed when possible as long as there is a pustular element. After crusting has occurred, wet dressings, salicylic acid plasters and even curettage may be used to advantage. It is advisable whenever possible for the patient to secure bed rest and elevation of the parts.

Conclusions: A case of verrucous bromoderma associated with erythema-nodosum-like nodules in pregnancy is reported. It is suggested that all unexplained cases of erythema nodosum have their urine examined for the presence of bromides. The resemblance of the granulomatous and verrucous lesions to blastomycosis is emphasized and the differential diagnosis discussed. The resistance to therapy in this case is best explained by the circulatory disturbances in the extremities coincident with her pregnancy plus the large amount of bromides ingested. This is partially substantiated by the more rapid involution of the eruption following delivery. A simple method for the detection of bromine in the urine is given in detail. The rationale of employing intravenous saline and high salt diet therapeutically is discussed, and the value of such therapy together with x-ray is emphasied.

## DISCUSSION

**Winston U. Rutledge:** Many times bromoderma occurs with any definite explanation of its source. In this case the source of the bromides was definitely established It has recently been brought out that bromide derivatives sometimes are present in baking preparotions which, in the presence of that or some other chemical, break down and free bromine is formed.

An interesting feature is that these lesions often continue long after the source of the bromine has been discovered and removed. In a case reported, bromine could be detected in the urine for more than a year after its source had been discontinued. In cases coming to autopsy usually the greatest amount of bromine is found in the thyroid gland, the next largest amount in the lesions of the skin and mucous membranes and the smallest quantity in the spleen and adrenals. No trace of bromine is found in the kidneys which is evidence of the fact that once ingested, bromine migrates very slowly.

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NEXT MEETING HARLAN, OCTOBER 1-4, 1934


## COUNTY SOCIETY REPORTS

**Grant:** The Grant County Medical Society met in regular session in the Court House, in Williamstown, July 18, 1934, at 7:30 P. M., with the following members present: Drs. N. H. Ellis, C. D. O'Hara, J. W. Abernathy, H. F. Mann, J. J. Marshall, J. D. George and C. A. Eckler.

Minutes of last meeting were read and approved and the regular topic hour entered into.

Dr. H. L. Claassen delivered a most interesting lecture, illustrating same with lantern slides, on the treatment of Fungus Infections of the Skin.. Dr. Claassen is one of Cincinnati's best skin specialists and Grant County Medical Society was lucky to get this treat. Absent members were very much losers. Dr. Claassen had with him, a Dr. Nelsen, also of Cincinnati. We are always glad to welcome men like these at any time in our meetings.

Dr. O'Hara opened the discussion and was followed by all the members present.

Dr. J. T. Davis, of Cornith, Ky., a member of Breckenridge County Society and American Medical Association, was unanimously elected to membership with us. We are glad to have Dr. Davis and wish him success in his new place at Cornith, Ky.

We had a most enjoyable meeting and although with extreme heat, we felt we had a splendid time and up-to-date instruction

The Program Committee reported that at our August meeting, we would have Dr. L. C. Hafer of Covington, Ky. on "Infant Feeding." Dr. Hafer is an up-to-date man on diseases of children and we urge all members to be present and hear him.

We now adjourned to meet at the usual time in August.

C. A. ECKLER, Secretary.

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**Grant:** The Grant County Medical Society held its regular session in the Court House, Wednesday, August 15, 1934 in Williamstown, with the following present members: C. M. Eckler, J. T. Stephenson, J. L. Price, J. J. Marshall, N. H. Ellis, A. D. Blaine and C. A. Eckler.

Visitors were: Dr. L. C. Hafer and Dr. E. E. DeVillez, Covington, specialists in Diseases of children and Dr. Pearce, an interne from St. Elizabeth Hospital.

Minutes of last meeting were read and approved and the usual routine of business dispensed with and under new business, the name of Dr. R. E. Kinsey was introduced to our society for membership and was unanimously elected. We have known Dr. Kinsey for some time and are much pleased to have him with us. As he will begin practicing medicine in Williamstown, Ky., about September 1, 1934, we wish him every success possible.

We now took up the subject for the evening, "Infant Feeding."

This was masterly handled by Dr. L. C. Hafer, of Covington. His essay was demonstrated on blackboard; showing and comparing the formulae for feeding the babies and was very interesting—in fact so much so that the time hurriedly passed.

He was very thorough in his essay. This was followed by discussions from all present, bringing out many more new points by questions.

We invite Dr. Hafer back again and thank him heartily for his excellent essay.

Topic for next meeting, "Syphilis," by Dr. N. H. Ellis, our worthy health officer.

We now adjourned to meet the third Wednesday evening in September at the usual hour.

C. A. ECKLER, Secretary.

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**Harrison:** The Harrison County Medical Society held its regular monthly meeting in the council room of the city building, August 6, 1934.

Members and visitors present were: Drs. Smiser, H. C. Blount, Chamerlain, Rankin Blount, Moody, Swinford, Wells, N. W. Moore, Martin, Rees, Wyles, McDowell, Midden, W. B. Moore and McNeely. Drs. Virgil Simpson, Frank Strickler and Herman from Louisville; Drs. John Scott and John Harvey, Lexington; Drs. Charles Daugherty, J. A. Orr and W. B. Hopkins, Paris.

The meeting was called to order by the President, Dr. McDowell. Reading of the minutes of the previous meeting, omitted.

Dr. Virgil Simpson read a paper on "Differential Diagnosis of the Vascular and Vaso-Motor Diseases of the Extremities," illustrated by lantern slides. Dr. Frank Strickler discussed the surgical treatment of these diseases. Discussion was opened by Dr. John W. Scott, followed by Drs. Herman, Rees and Daugherty.

Meeting adjourned.

W. B. MOORE, Secretary.

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**Harrison:** The Harrison County Medical Society held its regular monthly meeting at the Harrison Memorial Hospital, Monday, September 3, 1934.

Members present were: Drs. Wells, McDowell, Martin, Midden, Blount, Wyles, Rees, N. W. Moore, Smiser, Swinford, W. B. Moore and Alexander.

Dr. Tom Marks and Dr. Maxwell, Lexington, read papers. Dr. Marks read a paper on "The Diagnosis and Treatment of Poliomyelitis." Dr. Maxwell talked on the pathology of the disease. Discussion was opened by Dr. John Milton Rees, followed by Dr. Wyles and N. W. Moore. The discussion was closed by Drs. Marks and Maxwell and the meeting adjourned.

W. B. MOORE, Secretary

## NEWS ITEM

Mrs. L. L. Wright, Route 1, Boaz, Kentucky, has on hand a supply of ordinary standard drugs and instruments which belonged to her husband, who died recently. These can be purchased at very reasonable prices and it is suggested that anyone interested, write to Mrs. Wright.

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## BOOK REVIEW

POSTURES AND FRACTURES DURING LABOR AMONG PRIMITIVE PEOPLES, ADAPTATIONS TO MODERN OBSTETRICS, with chapters on Taboos, Superstitions and Postpartum Gymnastics, by Julius Jarcho M. D., F. A. C. S., New York; with 150 illustrations. Paul B. Hoeber, Inc., Publishers, New York. Price $3.50.

The purpose of this book is to transmit to modern obstetricians the application of those postures and practices utilized to advantage by primitive peoples in coping with their obstetric problems. Modern scientifically interpreted adaptations of the more helpful methods used by primitive peoples may assist the general practitioner or obstetrician who finds himself confronted with a difficult case in an isolated community without the aid of modern obstetric facilities.

Many of the illustrations included may appear to the reader to be mere repetitions. They portray, however, the curious anthropologic phenomenon that obstetric postures employed commonly by various ethnologic groups inhabiting widely separated parts of the world are strikingly similar but for minor variations.

The taboos and superstitions have been described not only for the popular interest which they evoke as anthropologic and ethnologic curiosities but also to illustrate the powerful influence which they sometimes exert on our every day life and especially on womanhood during pregnancy even in this modern age.

The influence of dress, diet, and environment on the skeletal development especially of the pelvis is likewise described.

In order to elucidate the value of certain positions the ever interesting analogy of obstetric postures assumed by lower primates and primitive peoples has been depicted.

In the chapter on postpartum gymnasties and exercises, the author has attempted to treat more elaborately a subject which in his opinion has been invariably dismissed with a few brief remarks.

It has appeared advisable incidentally to bring together certain relevant anthropologic facts which hitherto have been scattered through the literature and easily accessible to a limited group of men only.

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Published Monthly by the Kentucky State Medical Association Under the Supervision of the Council

VOL. 32. No. 11 | BOWLING GREEN, KY., | NOVEMBER, 1934


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THE N.Y. ACADEMY OF MEDICINE NOV 13 1934


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# Relative Values of Carbohydrates Employed in Infant Feeding

Continued down from 1911

## 1916

"For the addition of sugar, I usually use dextri-maltose, which does not easily cause fermentation."—*L. L. Meininger: Use of Eiweissmilch, Arch. Pediat., 33:529-532, July, 1916.*

## 1916

In the treatment of marasmus, "Three per cent of malt sugar should be administered from the first, afterwards running up to as high a per cent as the child will take."—*L. T. Royster: A Handbook of Infant Feeding, C. V. Mosby Co., St. Louis, 1916, p. 100.*

## 1916

"Least irritating of all sugars, and more readily digested and quickly absorbed, is maltose."—*H. Lowenburg: A Practical Treatise on Infant Feeding and Allied Topics, F. A. Davis Co., Phila., 1916, p. 73.*

## 1916

"Dextrin-maltose is valuable in cases where intestinal disturbances are due to fermentation of milk sugar."

"Treatment (of sugar intoxication) consists in eliminating the latter (whey salts) as well as the sugars from the dict temporarily, and when the symptoms have subsided, a different sugar in proper proportion should be cautiously added; maltose and dextrin are preferable, because they are not apt to produce fermentation, while milk sugar is prone to set up fever and diarrhea."—*E. E. Graham: Diseases of Children, Lea & Febiger, Phila., 1916, pp. 179-201.*

## 1917

"For children who are not gaining on a normal formula with a sufficient amount of sugar of milk, or children who vomit when sugar of milk is fed, or who are constipated, the use of maltose instead of lactose often gives most satisfactory results. This is readily accomplished by substituting for the 4 or 5 per cent. of added sugar of milk an equal amount of dextri-maltose or malted milk, which latter gives, in addition to the maltose, some protein food and an insignificant amount of fat. In many cases children who have failed to gain on other food will immediately show a marked gain as soon as this change is made."—*R. G. Freeman: Elements of Pediatrics. Macmillan Co., New York, 1917, pp. 191 and 192.*

## 1917

"The carbohydrates most used in infant feeding are the three soluble sugars and starch. The three soluble sugars are lactose, or milk sugar, maltose, or malt sugar, and saccharose, or cane sugar. Maltose is not used in its pure form, on account of its cost. The various commercial preparations of maltose are combinations of maltose with various dextrins, but as in digestion dextrin is converted into maltose, the chemistry is practically the same."

"The sugar which is not absorbed is broken down by the bacteria of the intestine into a great variety of fermentation products, among them being lactic, butyric, acetic, and succinic acids."

"Another effect of the excessive fermentation which results from a relative excess of carbohydrate in the food, is the formation of an excessive amount of gas. This may cause abdominal distention, and, extending backward, it may carry irritating acid products into the stomach, and thus cause vomiting."

"Lactose is the sugar most likely to produce acute symptoms. The stools are practically always green and very irritating. Flatulence and colic are less prominent."

"The maltose-dextrin preparations rarely produce acute exacerbations."—*C. H. Dunn: The Hygienic and Medical Treatment of Children, Southworth Co., Troy, New York, 1917, pp. 423, 424, 425, 428.*

## 1918

"The sugars in the foods are milk sugar which is found in mother's milk as well as in cow's milk, cane sugar and malt sugar. Though milk sugar is a natural ingredient of milk it is not well borne by babies when added to their food; they digest cane sugar, the ordinary granulated sugar, much better; malt sugar is the easiest digested by babies."—*C. G. Leo-Wolf: Nursing in Diseases of Children, C. V. Mosby Co., St. Louis, 1918, p. 24.*

## 1918

"Maltose (malt sugar) has the advantage of being very easily digested; when part of the sugar given is maltose, many children gain more rapidly in weight than when only milk sugar or cane sugar is used."—*L. E. Holt: The Care and Feeding of Children, D. Appleton & Co., New York, 1918, p. 66.*

## 1919

"In the administration of protein milk with its large protein content, by adding to it sugar which is not easily fermented (dextri-maltose), we produce, instead of pathologic fermentation, a condition of putrefaction which changes the acidity of the intestinal contents to alkalinity, the peristalsis is decreased, the intestinal contents pass slowly through the large intestines with absorption of fluid and excretion of calcium and magnesium salts. These minerals unite with fatty acids to form the typical fat-soap-clay-coloured constipated stools characteristic of protein milk feeding, and it is at this point that dextri-maltose should be added to the food."

"The majority of the cases were kept on protein milk for a period varying from three to four weeks, and, in many instances, contrary to the usual opinion, we were able to keep the children on protein milk plus starch and dextri-maltose, sufficient for their caloric needs for a period of several months, in each instance accompanied by a substantial gain in weight and normal increase in vigor and tissue turgor with comparative freedom from digestive symptoms."—*A. Brown and I. F. MacLachlan: Protein milk powder, Canad. M. A. J., 9:528-537, June, 1919.*

## 1920

"There are three sugars commonly employed in infant feeding: (1) malt sugar or dextri-maltose, (2) cane sugar, and (3) milk sugar. Malt sugar is the most easily digested and assimilated, cane sugar next and sugar of milk the least so."—*L. O. Frech: The caloric method of artificial feeding in normal babies, Illinois M. J. 38:484-488, Dec. 1920.*

## 1920

Regarding treatment in disturbed metabolic balance in infants, "The one carbohydrate which seems to give the most satisfactory results in these cases is malt sugar."—*C. H. Seybert: Disturbed metabolic balance in infancy, Hahneman, Monthly, pp. 379-382, June, 1920.*

## 1921

"Next to woman's milk is cow's milk in simple modification with water and sugar in proper proportions and amount according to the age of the child. Milk Sugar is the most expensive and least satisfactory sugar. Dextri-Maltose is the best sugar."—*A. A. Shawkey: Infant foods and infant feeding, West Virginia M. J. 15:284-287, Feb. 1921.*

## 1921

With reference to hypotrophy, "In mild cases, the addition of dextrimaltose instead of cane or milk sugar may be sufficient to obtain a gain in weight."—*C. Herrman: The treatment of nutritional disorders in artificially fed infants, New York M. J. 114-158-160, Aug. 1921.*

## 1921

"Maltose and dextrin compounds are acceptable to the infant's digestion in relatively larger quantities. They are not as sweet as cane sugar. They are of practical value when larger amounts of cane sugar are not well borne.

"The so-called 'Mead's Dextri maltose with Potassium Bicarbonate' is laxative, and in the presence of a stationary weight may be given in larger amounts."—*F. W. Fergusson: A method for the modification of cow's milk, Journal-Lancet, 41:628-629, Dec. 1, 1921.*

## 1921

For cases of fermentative diarrhea, ". . . the ideal plan of treatment would be to give a food which is low in sugar (the food which that group of organisms thrive on) and high in protein. Calcium caseinate milk accomplishes this purpose. In our series of cases, we found it was necessary to use the casein calcium for from 5-8 days; we then stopped it and added dextri-maltose to the formula."—*A. G. DeSanctis and L. V. Paider: The value of calcium caseinate milk in fermentative diarrhea, Arch. Pediat. 38:233-236, April, 1921.*

## 1922

In the treatment of diarrhea, "The sugar is added gradually as conditions admit, some sugar other than milk sugar or cane sugar being used, preferably dextrin and maltose."—*H. E. Small: Diarrhoea in bottle-fed infants, J. Maine M. A. 12:154-158, Jan. 1922.*

## 1922

"The use of other soluble carbohydrates other than lactose for milk modifications are very good. Some believe the addition of dextrose or dextri-maltose makes the casein curd softer and easier to digest. This is questioned, but all agree that in cases of malnutrition, where the patient is intolerant to lactose and cannot get the benefit needed from the fat in the dict that the dextri-maltose is invaluable as it is the easiest sugar to digest, and can be immediately used for energy production without undergoing further change."—*E. G. Padfield: Remarks on infant feeding, J. Kansas M. S. 22:97-101, April, 1922.*

Continued down to 1934

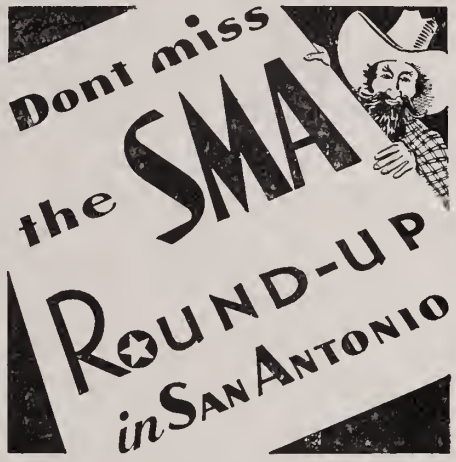
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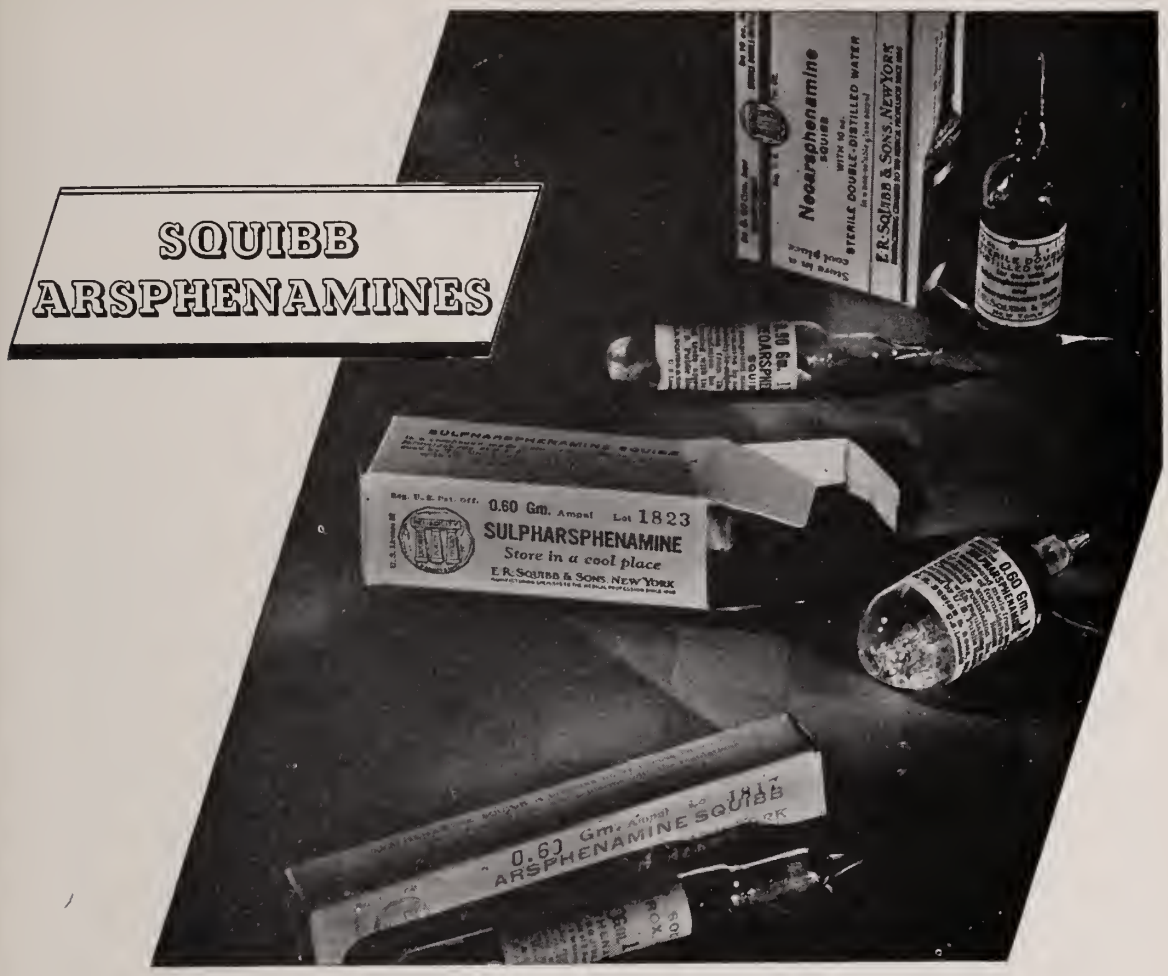

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# KENTUCKY MEDICAL JOURNAL

BEING THE JOURNAL OF THE KENTUCKY STATE MEDICAL ASSOCIATION

**Published Under the Auspices of the Council**

VOL. 32 NO. 11 BOWLING GREEN, KY. NOVEMBER, 1934

## HONORING THE PIONEER PHYSICIANS OF KENTUCKY

This edition of the JOURNAL is largely devoted to the proceedings of a called meeting of the Kentucky State Medical Association to honor the pioneer physicians of Kentucky.

The occasion of this special meeting was the dedication of the "Doctor's Shop" at Fort Harrod, in Harrodsburg, on June 21, 1934. The President-Elect, Dr. C. C. Howard, called the meeting to order. Hon. Ruby Laffoon, Governor of Kentucky, presented the building to the Kentucky State Medical Association. An address, accepting the responsibility for it, was delivered by Dr. Charles A. Vance, Chairman of the Council. The memorial plaque was unveiled by Miss Mary Tyler McCormack, Miss Frances Callaway Bate, Dr. Richard Alexander Bate, Jr., and Mr. Augustine Thornton Scott; the first three being descendants of Dr. Thomas Walker and the last of Dr. John Mitchell Scott.

Subsequent to the dedication of the "Doctor's Shop" a banquet was served at the Christian Church, in which more than three hundred members of the profession, of the Auxiliary and their guests participated.

Dr. C. B. VanArsdall, of Harrodsburg, President of the Pioneer Memorial Association, introduced Dr. McCormack, as Secretary of the Kentucky State Medical Association, who presented Dr. Irvin Abell, who acted as Toastmaster during the banquet. Addresses were delivered by Dr. Abell, Governor Laffoon, Dr. P. H. Barbour and Dr. C. C. Howard, and Mrs. B. K. Menefee, Mrs. G. A. Hendon and Mrs. J. I. Greenwell. Carleton's beautiful poem, "The Country Doctor," was read by Mrs. Eleanor Hume Offutt.

It was recognized by those who were responsible for this program that there are other names which shall later be honored by being added to this memorial plaque. Those now inscribed thereon were dug from the pages of history by Mrs. A. T. McCormack, Mrs. W. T. Lafferty, Mrs. J. C. Rogers and Mrs. G. A. Hendon. They request every one interested in the history of Kentucky to put them in touch with source information that will establish the names of others as having practiced medicine in Kentucky before 1800.

## DOCTORS TO HONOR PIONEER HEROINE OF SURGERY

The Kentucky State Medical Association, at its recent Annual Meeting at Harlan, took a practical step toward giving belated recognition to the debt of gratitude which the medical profession owes to the Pioneer Heroine of Surgery, Mrs. Jane Todd Crawford, upon whom Dr. Ephraim McDowell, at his frontier home in Danville, on Christmas Day, December 25, 1809, performed, without the aid of anesthesia or other modern requisites, the great experiment known as the "First Ovariotomy." Following the instructive, illustrated inaugural address of Dr. C. C. Howard, the newly installed President of the Association, individual donations from physicians and others for a memorial to Mrs. Crawford totaled over $200.00. Additional donations from physicians not present at the Harlan meeting are being mailed to Dr. A. T. McCormack, Secretary of the Kentucky State Medical Association, Louisville, who is also Treasurer of the Memorial Fund. Other members of the Memorial Committee are Dr. William A. Weldon, Chairman, Glasgow; Dr. Irvin Abell, Louisville; and Dr. W. E. Gardner, Louisville.

The remarkable experiment successfully performed at Danville 125 years ago was an epochal event. It opened the way to vast possibilities for the relief of human suffering through abdominal surgery. It also enlarged and multiplied the opportunities for useful service by the physician-surgeon in promoting and prolonging life for countless thousands of men, women and children—all of whom owe a deep debt of gratitude to Dr. McDowell for his courage in attempting the hitherto unknown and, perhaps, an equally deep debt of gratitude to Mrs. Crawford, both for her amazing determination to risk her life as the subject of a great experiment and for her almost unbelievable fortitude during the ordeal. As a result of the operation, Mrs Crawford recovered her health and lived thirty-two additional useful years.

Nearly seventy years after this remarkable experiment, members of the Kentucky State Medical Association contributed funds for the erection of the memorial to Dr. McDowell. This is a stately granite shaft, stand-

ing in McDowell Park, Danville, and dedicated, with fitting ceremonies, on May 14 1879. Dr. Samuel D. Gross of Philadelphia formerly a Professor at the Louisville Medical Institute, now the Medical School of the University of Louisville, was the orator of the occasion. In his oration, Dr. Gross said:

"All honor to the man who had the courage and the skill to do that which no man had ever dared to do before! All honor, too, to this heroic woman who, with death literally staring her in the face, was the first to submit calmly and resignedly to what certainly was at this time a surgical experiment. To her, too, let a monument be erected, not by the Kentucky State Medical Society or by the citizens of Kentucky, but by suffering women, who, with her example before them have been the recipients of the inestimable boon of ovariotomy with a new lease of their lives and with immunity from subsequent discomfort and distress. I know of no greater example in all history of heroism than that displayed by this noble woman in submitting to an untried operation."

On Armistice Day, November 11, 1930, the Kentucky State Medical Association again paid tribute to Dr. McDowell by unveiling in conjunction with the Southern Medical Association then in Annual Session at Louisville, the artist's model of the life-sized statue of Dr. McDowell in the rotunda of the Capitol at Frankfort. This model is the original of the bronze statue of McDowell representing Kentucky in the Hall of Fame in the National Capitol at Washington, and was a gift from the sculptor, Mr. Charles Neihaus to Dr. A. T. McCormack, who with his consent, turned the model over to the Kentucky State Medical Association.

So far the only monument, visible to the naked eye, to the memory of Mrs. Crawford is the simple white marble slab erected by her son, Reverend James Crawford, over her grave in the Johnson Cemetery in Graysville Indiana. The grave is neglected and the slab is hidden in weeds and undergrowth.

Members of the Kentucky State Medical Association now propose to place beside the stately McDowell shaft in Danville a simple stone marker to the memory of Mrs. Crawford. It is peculiarly fitting that the names of the physician-surgeon and the patient who together made medical history, be thus linked in the minds of generations to come.

---

Pasteur: Science has no nationality because knowledge is the patromony of humanity, the torch which gives light to the world.

## THE SOUTHERN MEDICAL ASSOCIATION

This great organization will hold its annual session this year in San Antonio. One of the greatest and most efficient of medical organizations, the Texas State Medical Association, will be our hosts. The program as arranged maintains the usual high excellence which has made the sessions of the Southern Medical Association noteworthy amongst medical meetings. Our beloved Dr. Chauncey W. Dowden is the Councilor for Kentucky and will lead its delegation to San Antonio.

In the General and Clinical sessions, the sixteen sections and eight conjoint meetings and the scientific exhibits every phase of medicine and surgery will be covered at the San Antonio meeting. The Southern Medical Association always presents a well-rounded meeting, a meeting complete in every detail.

San Antonio has good hotels, among them being the Gunter, Plaza, St. Anthony, Blue Bonnet, Robert E Lee and Lanier. Dr. H. O. Wyneken, Medical Arts Building, San Antonio, is Chairman of the Hotel Committee. Every visitor is assured comfortable quarters.

The Louisville and Nashville Railroad with its usual thoughtfulness, has arranged for special sleepers to leave Louisville on the Pan American at 12:22 P. M. Sunday, November 11, arriving in San Antonio, after a daylight ride through Texas, at 7:50 P. M. Monday, November 12. The round trip rate for this trip will be $43.60, and the lower berth from Louisville to San Antonio will cost $8.50 for each going and returning.

Following the meeting, a remarkable opportunity is presented to the doctors and their wives for a special tour through Mexico to its Capital, Mexico City. The total expense of this trip is not to exceed $140.00. Those who desire to take advantage of this most interesting tour should write immediately for reservations to Mr. C. P. Loranz, Secretary of the Southern Medical Association, Birmingham, Alabama.

This tour has been planned to give all who take it an interesting trip to Mexico, to enable them to see the most and the best there is to be seen in a short time. It has been planned as a professional movement, and will be kept as such, being handled as a "family party".

The medical profession of Kentucky is proud of its allegiance to the Southern Medical Association. The physicians of Texas have frequently been our guests and are anxious to return the hospitality we have offerred them here. We anticipate a very large attendance at San Antonio.

# Honoring Kentucky's Pioneer Physicians

DEDICATION OF THE DOCTOR'S SHOP
Thursday, June 21, 1934
Harrodsburg, Kentucky
Mrs. Emma Guy Cromwell, Presiding
Director of Kentucky State Parks.

Invocation .....Rev. T. Hassell Bowen, Harrodsburg
Recessional ..... Mrs. Robert Sory, Richmond
Mrs. Greene L. Johnson, Accompanist, Harrodsburg
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Hon. Ruby Laffoon, Frankfort
Governor of the Commonwealth of Kentucky
Acceptance Address .....
Dr. Charles A. Vance, Lexington
Chairman of the Council, State Medical Association.
Dedicatory Address .....
Dr. A. T. McCormack, Louisville
Secretary Kentucky State Medical Association
Unveiling of Tablet .....
Descendants of Dr. Thomas Walker
Miss Mary Tyler McCormack, Washington, D. C.
Mr. Augustine Thornton Scott, Lexington
Miss Frances Callaway Bate, Louisville
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Benediction .....Rev. G. W. Ellers, Harrodsburg

RECEPTION COMMITTEE
Mercer County Medical Society

President ..... Dr. D. Hunter Coleman
Vice-President.....Dr. C. W. Sweeney
Secretary-Treasurer ..... Dr. J. Tom Price

| | |
|---|---|
| Dr. R. E. Youmans | Dr. C. B. Van Arsdall |
| Dr. F. J. Nooe | Dr. J. B. Robards |
| Dr. T. O. Meredith, Jr. | Dr. Thomas A. Wash |
| Dr. R. T. Ballard | Dr. Bishop Wash |
| Dr. H. G. Sanders | Dr. G. L. Johnson |
| Dr. M. H. Sutherland | Dr. C. W. Sweeney |
| Dr. H. M. Baxter | Dr. E. V. Seay |

WOMAN'S AUXILIARY
To the Mercer County Medical Society

President ..... Mrs. T. O. Meredith, Jr.
Vice-President ..... Miss Gladys Seay
Vice-President ..... Mrs. J. Tom Price
Secretary ..... Mrs. J. B. Robards
Treasurer ..... Mrs. C. B. VanArsdall

| | |
|---|---|
| Mrs. T. O. Meredith, Sr. | Mrs. E. V. Seay |
| Mrs. Glave Goddard | Mrs. Lafon Riker |
| Mrs. Clell Coleman | Mrs. Bishop Wash |

BANQUET 7:00 P. M.
DR. IRVIN ABELL, Toastmaster
Louisville

Invocation .....
Dr. J. W. Carpenter, Harrodsburg
Presentation of Toastmaster
Dr. C. B. VanArsdall
Chairman Kentucky Pioneer Memorial Association
Dr. A. T. McCormack
Secretary Kentucky State Medical Association
Group of Songs
Tribute to the Pioneer Physicians.....
Hon. Ruby Laffoon, Frankfort
Governor of the Commonwealth of Kentucky
The Pioneer Doctor .....
Dr. Philip F. Barbour, Louisville
The Pioneer Doctor's Wife .....
Mrs. B. K. Menefee, Covington
State President Woman's Auxiliary
Group of Songs
The Pioneer .....
Dr. C. C. Howard, Glasgow
President-Elect Kentucky State Medical Association
The Pioneer's Wife .....
Mrs. George A. Hendon, Louisville
State Chairman of Archives Woman's Auxiliary
The Modern Physician's Wife .....
Mrs. J. I. Greenwell, New Haven
Group of Songs
The Country Doctor .....
Mrs. Eleanor Hume Offutt, Frankfort
"My Old Kentucky Home"
1774-1934
Mrs. Ruby Laffoon, Frankfort
Benediction....Dr. W. E. Arnold, Harrodsburg

Through the courtesy of WHAS, Louisville, the following artists contributed to the pleasure of the occasion.

Mr. Walter Merhoff, Baritone, Member American Opera Company, Miss Mary Frances Duane, Soprano, Miss Geraldine Thompson, Accompanist, of Louisville.

COMMITTEES AND HOSTESSES

Chairman ..... Mrs. D. M. Hutton
Secretary ..... Mrs. L. B. Givens
Treasurer ..... Mrs. J. Tom Price
McAfee ..... Miss Mary Lapsley
Salvisa ..... Miss Gladys Seay
Mrs. Bishop Wash.....Cornishville
Mrs. T. O. Meredith.....Burgin

| | |
|---|---|
| Mrs. W. W. Ensminger | Mrs. Ernest Prewitt |
| Mrs. Erroll Draffen | Mrs. Grace Fishback |
| Mrs. J. B. RoBards | Mrs. Lafon Riker |
| Mrs. William Hynes | Mrs. Lee Sims |
| Mrs. R. V. Green | Miss Nancy Smock |
| Mrs. Clell Coleman | Mrs. Wallace Rue |
| Miss Ora McCoun | Mrs. Donald Edwards |
| Mrs. Leslie Crutcher | Mrs. H. C. Wood |
| Mrs. Glave Goddard | Mrs. J. B. Watkins |
| Mrs. Bacon Moore | Mrs. T. O. Meredith, Jr. |

Miss Elizabeth Van Arsdall
Chairman of Reception Committee and Hostesses

| | |
|---|---|
| Mrs. D. L. Moore | Mrs. D. Hunter Coleman |
| Mrs. Alfred Curry | Mrs. T. O. Meredith, Sr. |
| Mrs. Cecil Brown | Mrs. W. E. Allen |
| Mrs. W. N. Brown | Mrs. E. V. Seay |
| Miss Mary D. Powell | Mrs. R. T. Ballard |
| Mrs. Lee Smock | Mrs. H. M. Baxter |
| Miss Lilly Hunter | Mrs. C. B. VanArsdall |
| Mrs. Jas. H. Spillman | Mrs. C. W. Sweeney |
| Miss Neva Williams | Mrs. C. N. Riker |
| Mrs. Leon Morgan | Mrs. L. D. Brewer |
| Mrs. Willard Gabhart | Mrs. J. Frank VanArsdall |
| Mrs. J. Herman Allen | Mrs. Geo. W. Edwards |
| Mrs. Chas. A. Hardin | Mrs. Phillip Hannah |
| Mrs. J. Hal Grimes | Mrs. Howard Davis |
| Mrs. T. H. Coleman | Mrs. E. H. Gaither |
| Mrs. Glover Kyle | Mrs. H. G. Sanders |

Mrs. C. E. Rankin

## INVOCATION

Rev. T. Hassell Bowen,

Harrodsburg

Eternal God, our Father, we are gathered here today to give Thee thanks for the founding fathers who braved the countless perils of the wilderness and laid broad and deep the foundations of the culture which is our priceless heritage. We thank Thee for their mighty faith, their dauntless courage, and their vicarious spirit. Thou didst inspire them with the convictions that before them lay a new Promised Land and that beneath them were the Everlasting Arms. And among the sacred dead whom we honor today we especially remember the early doctors who came west of the mountains inspired by the call of suffering pioneers as they faced hardships of the wilderness. We bless Thee for the many eminent doctors and surgeons who today have gathered here from over the state and nation to pay a fitting tribute to their medical forebears who shed everlasting glory on the medical profession. May we, O God as their sons and daughters, cherish their imperishable labors and show our worthiness of them by rendering in our generation a similar and better service to the suffering world.

In His name. Amen.

## ASSIGNING THE BUILDING

Hon. Ruby Laffoon
Governor of the Commonwealth of Kentucky

I have the very distinguished honor of presenting to the Kentucky State Medical Association this building, The Doctor's Shop, in commemoration of the pioneer physicians who brought the art and science of medicine to Kentucky before 1800.

## ACCEPTANCE OF DOCTOR'S SHOP*

Charles A. Vance, M. D.

Lexington.

Chairman of the Council

Mr. Chairman, Ladies and Gentlemen, Mine is a very pleasant and agreeable duty at this time today of accepting this very fitting memorial to the pioneer doctors of Kentucky for the Kentucky State Medical Association. We all hold and reverence the memory of these pioneer physicians and not enough could be said in their behalf. I do not intend in any way to detract from their virtues and accomplishments but I do wish to remind you that since the Commonwealth was founded we have had a well qualified and sincere and courageous profession. And some of them have been among the greatest in this land of ours.

As Chairman of the Council, representing the House of Delegates of the Kentucky State Medical Association, and on behalf of the Medical profession of Kentucky, I formally accept this memorial. May the memory of these pioneer physicians always be kept alive.

## THE PIONEER PHYSICIANS OF KENTUCKY AND THE WEST*

A. T. McCormack, M. D.

Louisville.

Secretary of the Kentucky State Medical Association.

By the authority of our President, the Kentucky State Medical Association is gathered together today to honor the group of men who before 1800, brought the art and science of medicine into the then wilderness of Kentucky. We consider ourselves honored in paying this tribute to those men who were our professional forebears. It is difficult for us to visualize, even in the presence of Fort Harrod itself, what it must have meant to those educated, cultured, trained men to leave their places of residence along the eastern seaboard and make their way through a wilderness, establishing new homes in this sparsely settled district which had so recently been

*Dedicatory Address delivered at the unveiling of the memorial plaque on the Doctor's Shop, at Fort Harrod, Harrodsburg, June 21, 1934.

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| INDICATIONS | SUGGESTED DOSAGE *of Haliver Oil with Viosterol* |
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| For routine administration to infants and small children | 8 to 10 drops daily |
| Rickets | 15 to 20 drops daily |
| Infantile Tetany and Spasmophilia | 10 to 15 drops daily |
| *Pregnancy | 1 or 2 capsules three times daily |
| *Lactation | 1 or 2 capsules three times daily |
| *General Debility | 1 or 2 capsules three times daily |
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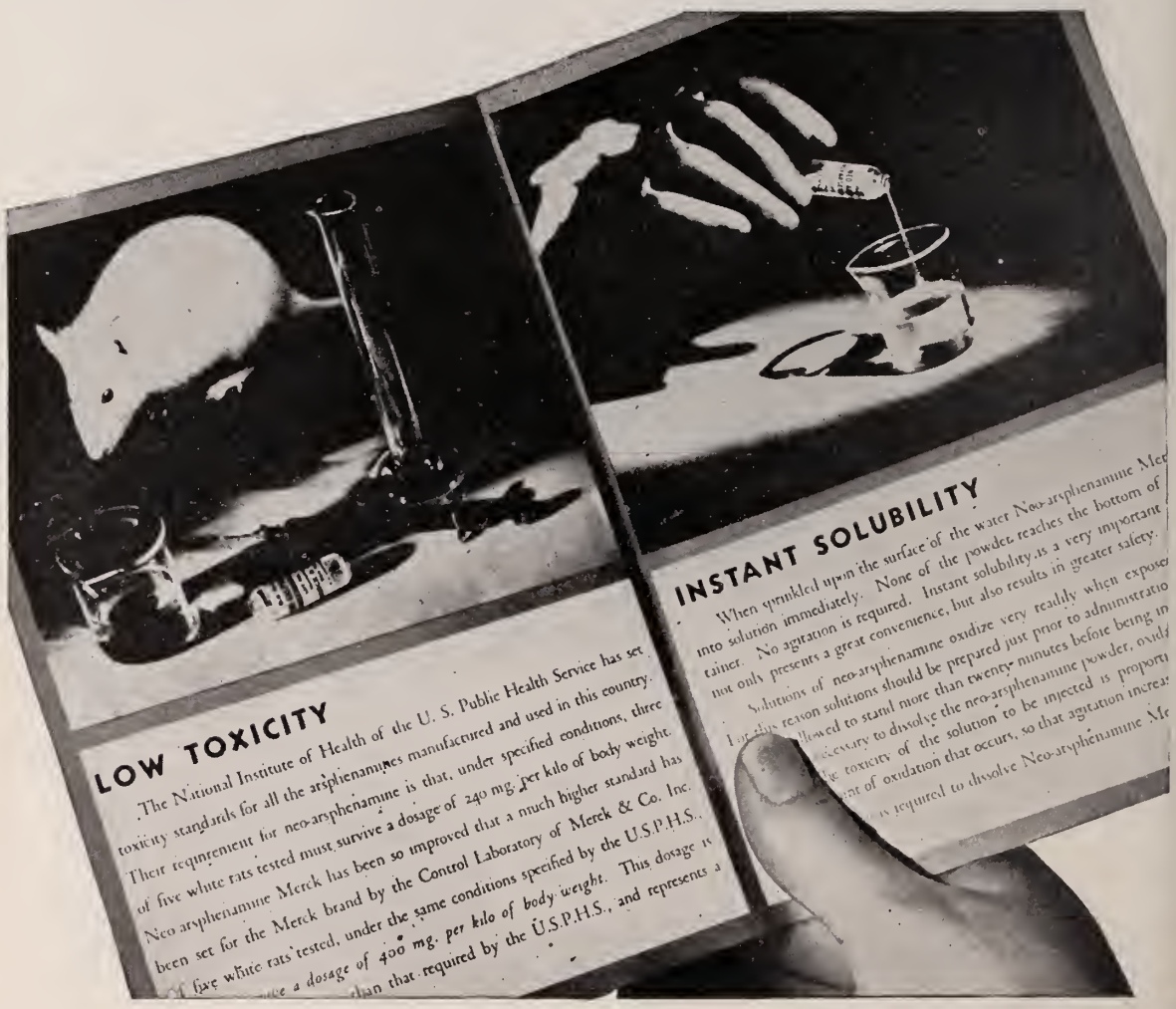
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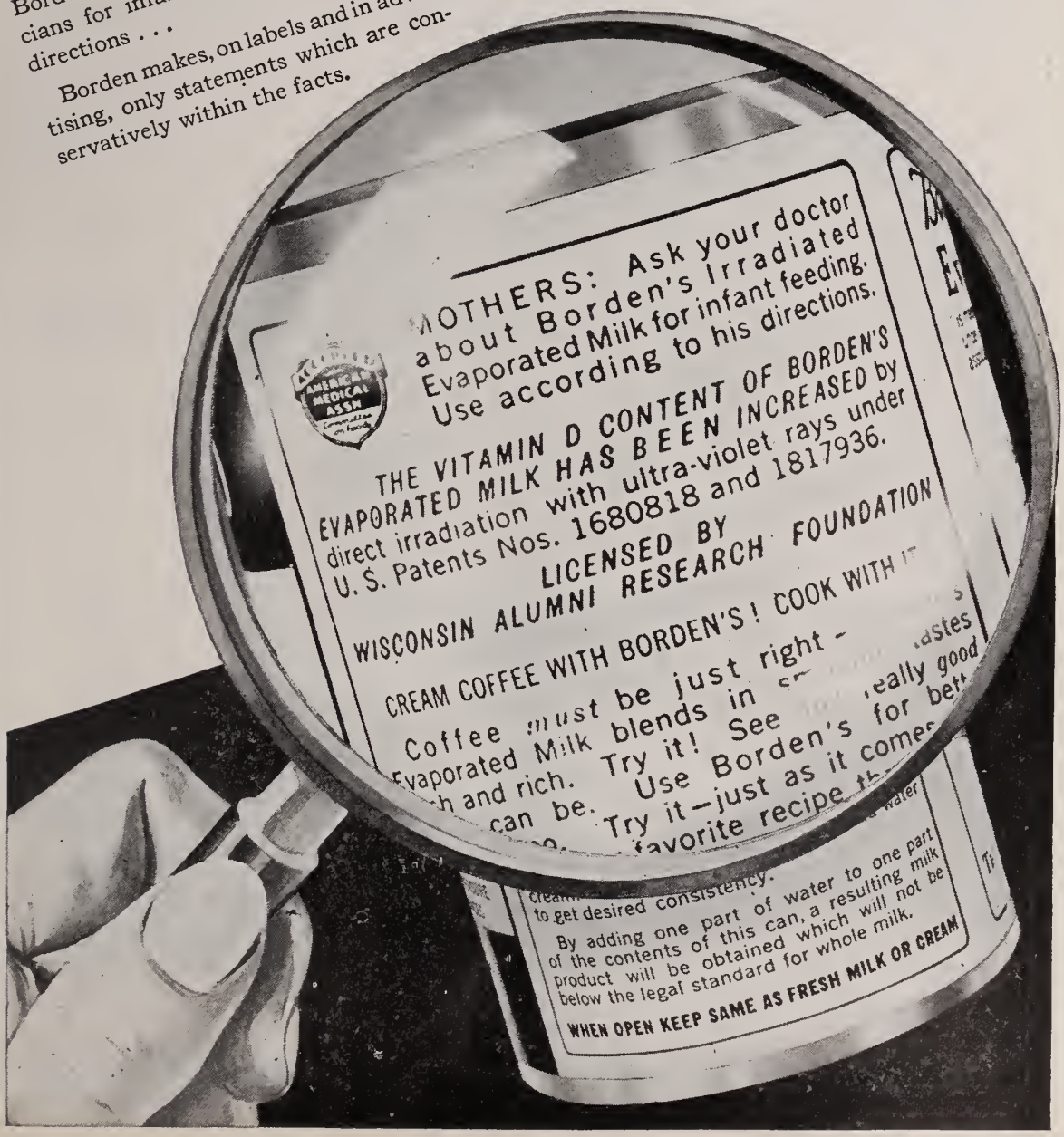
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and
Nervous Disease



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E. W. STOKES, M. D Medical Director, 923 Cherokee Road, Louisville, Ky.

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NERVOUS DISEASES

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Floyd W. Aplin, M. D.

Waukesha, Wis.


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Incorporated.

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An ethical institution, with modern equipment, for the care and treatment of mental and nervous diseases, and selected cases of alcoholic and drug addiction. Situated in the residence portion of the city, adjacent to Central Park, yet quiet and retired. Separate apartments for male and female patients, all of whom have the personal attention of two physicians resident in the Sanatorium.

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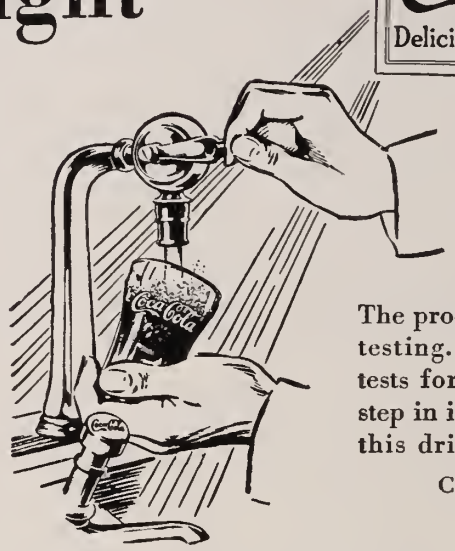
W. E. RENDER, M.D., Medical Director

A. GUIGLIA, M. D., Resident Physician

W. E. GARDNER
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EMERSON A. NORTH, M. D.,
Visiting Consultant.

D. A. JOHNSTON M. D.
Resident Medical Director

REST COTTAGE

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## CALENDAR OF COUNTY SOCIETY MEETINGS

| COUNTY | SECRETARY | RESIDENCE | DATE 1934 |
|---|---|---|---|
| Adair | N. A. Mercer | Columbia | November 7 |
| Allen | A. O. Miller | Petroleum | November 28 |
| Anderson | J. B. Lyon | Lawrenceburg | November 5 |
| Ballard | F. H. Russell | Wickliffe | November — |
| Barren | Paul S. York | Glasgow | November 21 |
| Bath | H. S. Gilmore | Owingsville | November 12 |
| Bell | J. G. Foley | Pineville | November 9 |
| Boone | R. E. Ryle | Walton | November 21 |
| Bourbon | W. B. Hopkins | Paris | November 15 |
| Boyd | R. G. Culley | Ashland | November 6 |
| Boyle | P. C. Sanders | Danville | November 13 |
| Bracken | J. M. Stevenson | Brooksville | November 5 |
| Breathitt | O. M. Goodloe | Jackson | November 20 |
| Breckinridge | J. E. Kincheloe | Hardinsburg | November — |
| Bullitt | S. H. Ridgeway | Shepherdsville | November — |
| Butler | G. E. Embry | Morgantown | November 7 |
| Caldwell | W. L. Cash | Princeton | November 6 |
| Calloway | A. F. Russell | Murray | November 1 |
| Campbell-Kenton | Luther Bach | Bellevue | November 1 & 15 |
| Carlisle | G. W. Payne | Bardwell | November 6 |
| Carroll | J. M. Ryan | Carrollton | November — |
| Carter | W. S. Hawn | Grayson | November 13 |
| Casey | Wm. J. Sweeney | Liberty | November 22 |
| Christian | M. A. Gilmore | Hopkinsville | November 20 |
| Clark | R. H. Scobee | Winchester | November 16 |
| Clay | J. L. Anderson | Manchestor | November — |
| Clinton | S. F. Stephenson | Albany | November 17 |
| Crittendon | C. G. Moreland | Marion | November 12 |
| Cumberland | W. F. Owsley | Burkesville | November 7 |
| Daviess | I. A. Thorpe | Owensboro | November 13 & 27 |
| Elliott | | | |
| Estill | Walter Cox | Irvine | November 14 |
| Fayette | John Harvey | Lexington | November 13 |
| Fleming | J. B. O'Bannon | Flemingsburg | November 14 |
| Floyd | E. E. Martin | Allen | November 9 |
| Franklin | W. S. Snyder, Jr. | Frankfort | November 1 |
| Fulton | Glynn F. Bushart | Fulton | November 14 |
| Gallatin | J. M. Stallard | Sparta | November 15 |
| Garrard | B. Earl Caywood | Lancaster | November 15 |
| Grant | C. A. Eckler | Dry Ridge | November 21 |
| Graves | H. H. Hunt | Mayfield | November 6 |
| Grayson | C. F. Blankenship | Leitchfield | November 29 |
| Green | S. J. Simmons | Greensburg | November 5 |
| Greenup | Carl M. Gambill | Greenup | November 9 |
| Hancock | F. M. Griffin | Hawesville | November 5 |
| Hardin | D. E. McClure | Elizabethtown | November 8 |
| Harlan | Clark Bailey | Harlan | November 24 |
| Harrison | D. E. McClure | Elizabethtown | November 5 |
| Hart | S. F. Richardson | Munfordville | November 6 |
| Henderson | Walter O'Nan | Henderson | November 12 & 26 |
| Henry | Owen Carroll | New Castle | November 26 |
| Hickman | Chas. Hunt | Clinton | November 1 |
| Hopkins | David L. Salman | Madisonville | November 1 |
| Jackson | | | November 3 |
| Jefferson | Chas M. Edelen | Louisville | November 5 & 19 |
| Jessamine | J. A. VanArsdall | Nicholasville | November 22 |
| Johnson | P. B. Hall | Paintsville | November 10 |
| Knott | M. F. Kelley | Hindman | November 24 |
| Knox | F. R. Burton | Barbourville | November 23 |
| Larue | D. W. Gaddie | Hodgenville | November — |
| Laurel | Oscar D. Brock | London | November 14 |
| Lawrence | W. C. Gose | Louisa | November 19 |
| Lee | W. D. McCullom | Beattyville | November 10 |
| Leslie | John H. Kooser | Hyden | November — |
| Letcher | R. Dow Collins | Whitesburg | November 27 |
| Lewis | J. D. Liles | Vanceburg | November 19 |
| Lincoln | Lewis J. Jones | Houstonville | November 16 |
| Livingston | Wm. C. Davis | Salom | November — |
| Logan | Walter Byrne, Jr. | Russellville | |
| Lyon | H. H. Woodson | Eddyville | November 6 |
| McCracken | Leon Higdon | Paducah | November 14 & 21 |
| McCreary | R. M. Smith | Stearns | November 5 |
| McLean | G. L. Thompson | Calhoun | November 8 |
| Madison | Hugh Mahaffey | Richmond | November 15 |

| COUNTY | SECRETARY | RESIDENCE | DATE 1934 |
|---|---|---|---|
| Marion | W. C. Guffey | Lebanon | November — |
| Marshall | L. Henson | Benton | November 21 |
| Mason | Allen F. Murphy | Maysville | November 14 |
| Meade | A. A. Baxter | Brandenburg | November 22 |
| Menefee | E. T. Riley | Frenchburg | November — |
| Mercer | J. Tom Price | Harrodsburg | November 12 |
| Metcalfe | P. W. Bushong | Edmonton | November — |
| Monroe | Geo. E. Bushong | Tompkinsville | November — |
| Montgomery | D. H. Bush | Mt. Sterling | November 13 |
| Morgan | W. H. Wheeler | Betsy Sayne | November — |
| Muhlenberg | G. L. Simpson | Greenville | November 13 |
| Nelson | R. H. Greenwell | Bardstown | November — |
| Nicholas | T. P. Scott | Carlisle | November 19 |
| Ohio | Oscar Allen | McHenry | November 7 |
| Oldham | S. J. Smock | LaGrange | November 6 |
| Owen | K. S. McBee | Owenton | November 1 |
| Owsley | D. E. Wilder | Booneville | November 5 |
| Pendleton | W. A. McKenney | Falmouth | November 14 |
| Perry | R. L. Collins | Hazard | November 12 |
| Pike | M. D. Flanary | Pikeville | November 5 |
| Powell | J. W. Johnson | Stanton | November 5 |
| Pulaski | M. C. Spradlin | Somerset | November 8 |
| Robertson | | | November 19 |
| Rockcastle | Lee Chestnut | Mount Vernon | November — |
| Rowan | G. C. Nickell | Morehead | November 27 |
| Russell | J. B. Scholl | Jabes | November 12 |
| Scott | F. W. Wilt | Georgetown | November 1 |
| Shelby | W. E. Morris | Shelbyville | November 15 |
| Simpson | N. C. Witt | Franklin | November 13 |
| Spencer | | | November — |
| Taylor | W. B. Atkinson | Campbellsville | November 8 |
| Todd | B. E. Boone, Jr. | Elkton | November 7 |
| Trigg | H. L. Wallace | Cadiz | November 28 |
| Trimble | J. J. Gerkins | Bedford | November — |
| Union | D. C. Donan | Morganfield | November 28 |
| Warren | Hal Neal | Bowling Green | November 14 |
| Washington | J. H. Hopper | Willisburg | November 21 |
| Wayne | R. E. Teague | Monticello | November 1 |
| Webster | C. M. Smith | Dixon | November 30 |
| Whitley | C. A. Moss | Williamsburg | November 1 |
| Wolfe | G. M. Center | Campton | November 5 |
| Woodford | Chas. F. Voigt | Midway | November 1 |


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the happy hunting ground of the savage sojourners who had been its only residents. Most of those we honor today had not only borne the hardships of the long trek over the wilderness trail, but had heard the savage warwhoop that told them of the imperiled and beleagured lives of their friends and loved ones. Many men came with a vision of wealth hoping to become landed proprietors in this developing area. These men we honor brought with them their meager equipment, because they realized that a settlement was impossible without the service of a physician. They were required to meet and solve every emergency of human life without consultation, without access to the supplies we deem so essential, and without most of the knowledge and equipment that we now feel essential for the proper practice of our profession. They did, however, have courage, initiative, and the spirit of service that are now as essential to the proper practice of medicine as they then were.

It is with peculiar pride that the medical profession again recounts the story of the glorious adventure of Doctor Thomas Walker, a really great physician, who first came through Cumberland Gap, and who built the first residence in Kentucky near Barbourville. His privations and the dangers through which he and his companions passed are recounted very simply in his diary. But, I think we can feel today that the prestige of our profession in Kentucky has been to some degree augmented by the fact that its discoverer was a physician.

The men we honor, honored medicine. Picture, if you please, the dramatic stories of McDowell, Brown and Brashear.

With a matchless courage, Ephraim McDowell immortalized himself and set a proper precedent for all surgery in the diagnosis, advice and treatment which he gave to an equally courageous woman, Jane Todd Crawford, on his historic visit to her home in Greensburg. Her two physicians were baffled by the complexity of her case and called McDowell in consultation. Picture him riding over the trail that had first been made by the buffaloes and padded down and marked by the Indians and pioneers, the sixty-four miles in wintry weather, from Danville to her home. Mark the kindliness and thoroughness with which he made his examination and established his diagnosis. Keep before your minds the definite and courageous advice he gave this suffering woman. Mark well her ready acceptance of what must have seemed to her his desperate plan. Ride with this suffering woman over this desperate trail on horseback over these tedious miles to Danville, through a wintry wilderness, and suffer again with her as she became the first of the myriad of women who were to be relieved from a condition which had heretofore been hopeless. Without anesthesia, without any of the comforts which now protect our patients from shock, with the simplest and most fragile equipment, this genius performed on this noble woman, and the others after her, a delicate operation, which today is fraught with danger, and his operative record has not yet been excelled by our most accomplished surgeons in the percentage of his recoveries. Modern surgery was born that day in Danville. Its father was Doctor Ephraim McDowell; its Mother, Jane Todd Crawford. In our profession alone tens of thousands of sufferers who had not otherwise been relieved of their afflictions are their beneficiaries and these will be countlessly multiplied until the end of time.

Picture Samuel Brown, who had returned with McDowell from Edinburgh, bearing in his pocket, in homemade beeswax balls, the virus for vaccination against smallpox that had been given to him by Jenner himself. Mark his courage and boldness in fearlessly vaccinating more than five hundred of those residing about Lexington. When this first practice of preventive medicine was introduced into a comparative wilderness successfully, when it was still doubted by the learned members of our profession in the medical centers of the world, Samuel Brown had vaccinated in Kentucky more people than had then been protected from the most terrible of all epidemic diseases in all the balance of the world.

A tremendous pride thrills us as we think that surgery had its birthplace in the then village of Danville and preventive medicine in the then village of Lexington, amongst these, our pioneer forebears. These men realized that they had brought the torch of knowledge and enlightenment and the spirit of service to the West and had accepted their responsibility for the medical care of the new settlements. They realized, too, that as these settlements became more numerous it was necessary that their successors should be developed and trained in the art and science of medicine. The medical department of Transylvania University was organized and developed when there were but one or two other medical schools in the original colonies. From its halls the medical profession of the West fared forth to carry the beneficence of its service to the people of the newly organized states and territories which are now the glories of this Union.

These men built the professional foundation on which we, their successors, are work-

ing today. They first obtained the confidence of their public. They bequeathed this confidence to us, their successors, and here today we call their honored names and inscribe them in imperishable bronze on this tablet on the Doctor's Shop, that all who pass may pause and read and honor them.

These young people, three of them descended from Dr. Thomas Walker, and one from Dr. John Mitchell Scott, will now withdraw the flowers which drape our memorial plaque and the names of Dr. Thomas Walker, Dr John Connolly, Dr. George Hart, Dr Andrew McKinley, Dr. Lindsey Powell, Dr. Alexander Skinner, Dr. John Johnston, Dr. William Goforth, Dr. John Knight, Dr. Absalom Bainbridge, Dr. James O'Fallon Dr. Basil Duke, Dr. Samuel Brown, Dr. Ephraim McDowell, Dr. Peter Trisler, Dr. Benjamin Johnston, Dr. James McPheeters Dr. Frederick Ridgely, Dr. Walter Warfield, Dr. Walter Brashear, Dr. James Fishback, Dr. William Craig Galt, Dr. Richard Ferguson, Dr. John Collins, Dr. Philip Trapnall Dr. John Mitchell Scott, Dr. Charles McCreary, are permanently inscribed on the Honor Roll of the Pioneer Physicians of Kentucky and the West.

## PRESENTATION OF THE TOASTMASTER, DR. A. T. McCORMACK*

Condit B. Van Arsdall

Harrodsburg.

His Excellency, Governor Laffoon, Doctor Howard, President-Elect Kentucky State Medical Association, Mrs Menefee President Woman's Auxiliary to Kentucky State Medical Association, Friends and Guests:

On this 160th Anniversary Celebration of the beginning of the first permanent Anglo-Saxon settlement west of the Alleghenies and the 159th of the building of the fort that was to protect the home-seeking pioneers who were soon to come, representing the Kentucky Pioneer Memorial Association, I extend to you most hearty greetings.

As our birthday is June 16th, you will see we are a little late.—on this June 21.—for which fact we can offer three explanations:—1st, this is a doctors' celebration, and as you know doctors are uncertain and apt always to be a little late; 2nd, I will leave it to any doctor present, an actual birthday which is only five days late is not so bad; and 3rd, the women asked that the celebration be deferred and as the birthday depends upon the woman always, what could we do about it? Anyway, if a birthday is often late, why should not the celebration of it?

I have here a very interesting memento of the early days, a pestle used for many years from 1825 by Dr. Samuel James Woods, a number of whose descendants live in Harrodsburg today. It will be used as a gavel this evening by the Chairman.

We have memorialized the pioneers who came seeking homes for themselves and their families; we have honored the pioneer statesmen who came to make a state, an integral part of a great nation; the pioneer soldiers who brought to realization the dreams of those statesmen; the pioneer circuit-riders who came and laid the foundations of religious organization and worship in what was then the wilderness, but which was to become an enlightened and prosperous community.

Not among the very first, but very soon after came the pioneer physicians, and it seemed to us very necessary in a complete program to pay tribute also to these men who themselves played a most important part in the establishing of our state upon a stable foundation. The excellent women of the Auxiliary of the Kentucky State Medical Association responded at once to the suggestion as did the Association itself through its officers.

The result is that under the auspicies of our Kentucky Pioneer Memorial Association and the Kentucky State Medical Association we have this meeting tonight, which you have approved already by your presence and which we hope you will enjoy.

I have been given a very unusual task,—that of introducing a very famous son of Kentucky, so that he may in his turn introduce a very eminent son of Kentucky, who will in his turn introduce to you some very honored sons and daughters of Kentucky. Both Dr. McCormack and I are to introduce Dr. Abell. I am not sure whether this is a compliment to Dr. Abell in that it requires the best efforts of two men adequately to introduce him, or whether it is meant as a reflection on Dr. McCormack and myself in that each of us is considered capable of only a half-way effort. At any rate, we all have great pleasure tonight in the presence of both of these men,—the one, Dr. McCormack, an outstanding figure in public health work in the United States since he took charge of that work in this state twenty-two years ago, and also internationally known by his work in Panama. He should be classed as an economist, and a unique type of economist, as any one certainly should who can secure appropriations from legislature after legislature, Democratic and Republican, and then expend

*Delivered at the Banquet of the Kentucky Pioneer Memorial Association, Harrodsburg, June 21, 1934.

that money so skillfully and with such benefit to the state that even his unfriendly critics could not legislate him out of the office he fills with so much honor to himself and the Commonwealth.

And parenthetically I may say that it is a firm belief in some quarters that the Governor here finally had to call on him for his method recently when the sales tax hung in the balance.

Then we have our Toastmaster for the evening, Dr. Abell, known throughout the land as an eminent surgeon, Past President of the Southern Medical Association, and with many other honors bestowed by his profession on account of his outstanding qualities, also Professor of Clinical Surgery in the University of Louisville Medical School, where he has made and is making a lasting impression on the younger medical men of this and other states.

So we have both the economist and the professor, and you all know from recent experience that they can successfully run the government, the home, and everything else to which they care to give attention. And now I will ask that the economist, Dr. McCormack, stand, and I will introduce him by a definition, and later he will himself introduce the professor.

"An economist is a man who knows a great deal about a very little; and who goes on knowing more and more about less and less, until finally he knows practically everything about nothing; where as, a professor, on the other hand, is a man who knows a very little about a great deal, and keeps on knowing less and less about more until, finally, he knows practically nothing about everything."

Ladies and Gentlemen, Dr. Arthur T. McCormack, who will introduce the Toastmaster, Dr. Irvin Abell.

## OUR PIONEERS*

IRVIN ABELL, M. D.
Louisville.

I recognize that the duties of a toastmaster are rightfully and properly restricted to the introduction of the selected speakers but I cannot refrain from commenting upon the background of today's celebration. The opening lines of James Barrow Hope's ode Our Heroic Dead, are as follows:

"A king once said of a prince struck down,
Taller he seems in death:
And this speech holds truth, for now as then
Tis after death that we measure men."

Now, more than a century after the activities of those whom we honor tonight, we come together to pay them our tribute of respect and homage, to attest our reverence for the spirit which led them ever onward and upward, to give voice to our gratitude for the heritage which they have transmitted to us and for the inspiration which their example has instilled into those of us who follow. It has been generally thought that Daniel Boone, who came to what is now Kentucky in 1769, was the first white man to penetrate this domain: this honor, however, is to be accorded to a member of our profession, Dr. Thomas Walker, of King and Queen County, Virginia, who in 1750, came through Cumberland Gap, pursued what is now known as "The Wilderness Trail" as far as the Kentucky River, turned up one of its branches to its head and crossed over the mountains to New River, in Virginia, at the place now called Walkers Meadows.

He made a second trip in 1758, at which time he penetrated as far as Dick's River. While Dr. Walker was both a practicing physician and one of the first statesmen of Virginia, his expeditions into Kentucky were aside from his professional activities and of exploratory character only. It seems, therefore, particularly appropriate that this state, first explored by a physician, should have developed a long story of medical leadership. The first physician to practice in the state was Dr. George Hart, who came from Maryland in 1775 and settled at Harrodsburg; later he engaged in practice in Louisville and still later removed to Bardstown, at which place he died. In these days of fervid discussion upon the high cost of medical care, a partly receipted bill, rendered while practicing in Louisville in 1780, is interesting as illustrating the then current charges for professional services and as well, the willingness of people to pay such: it was rendered by Dr Hart to George Clews as follows: May 23 1780: four doses Calomel, $240: four blistering plasters for your child, $240: Total $480. The pioneer physicians who during the latter part of the 18th century crossed the Alleghenies to bring medicine to this western country and made possible its remarkable development in this state were men of intellectual attainments and of heroic mould: despite the rough conditions under which they found themselves, they preserved much of the culture and courtesy under which they were reared and gave to Kentucky's social fabric their part of the charm which has since distinguished it. The accomplishments of not a few have carved their indelible imprint on the scroll of time and need no commendatory words of ours to enhance their value: their contributions live in daily action and

*Toastmaster's Address before the Banquet of the Kentucky Pioneer Memorial Association, Harrodsburg, June 21, 1934.

in the history of medical literature—for the most part fully and accurately recorded. They enjoyed in large measure those qualities for which Americans are noted the world over—ingenuity of invention, independence of thought and enthusiasm of purpose, combined with discernment to perceive, courage to undertake and patience to carry through. It is difficult for the modern physician to conceive of the courage and hardihood, the vision and insight of these pioneers in contributing to the development of medicine without the aid of laboratories, hospitals, anesthesia and surgical cleanliness and it is difficult for all of us to disassociate the privations and dangers of frontier settlements from the comfortable affluence and safety of the communities in which we now live. When the primal objects of food and shelter were assured the early Kentucky pioneers, their thoughts turned to the moral and mental upbringing of their children, leading to the establishment of Transylvania University in 1780 to which a medical department was added in 1799 with the appointment of Drs. Samuel Brown and Frederick Ridgely, two of the pioneers whose fame and names we commemorate today, as professors therein The faculty of this school embraced a coterie of brilliant teachers whose names and fame are cherished as a heritage by the medical profession of Kentucky and who gave to the commonwealth a contribution in medical education of incomparable value.

I fear that I have grossly exceeded the privilege and prerogative of a toastmaster and humbly express my thanks for your indulgence, taking refuge in the old adage that from the fulness of the heart, the mouth speaketh. The tribute to these early physicians will be paid by one who needs no introduction: it is my privilege to present Hon. Ruby Laffoon, Governor of the Commonwealth of Kentucky, who will speak to us.

## A TRIBUTE TO THE PIONEER PHYSICIANS OF KENTUCKY*

Hon. Ruby Laffoon

Governor of the Commonwealth of Kentucky.

No event since I have been the Executive of the Commonwealth of Kentucky has given me more pleasure than this opportunity, in honoring the pioneers of its medical profession, to pay the tribute which we owe today to them and to their successors.

These men little thought when they were performing the fine service to the first citizens of the State that they were doing any extraordinary thing that would eventually enroll their names in the Hall of Fame. Typical of physicians everywhere and in all times, they came to serve, and they felt that their reward was sufficient when they had treated the sick, healed the wounds of the injured or presided over that most remarkable of all human events—the birth of a baby. Animated by this altruistic objective, they built more wisely than they knew. First in Lexington and then in Louisvile, they established institutions which have trained their successors down to this day.

From the very earliest days of the Commonwealth, no other group has exercised a greater or more beneficent influence. It is interesting, as one reads the names on this bronze plate and recalls their various histories, to consider the influence of this group on the human race everywhere. We are told by historians that surgery and preventive medicine were initiated by these men. Not Kentucky alone, but the whole world may well pause here and give them its grateful homage.

Kentucky has delighted to recognize the importance of its medical profession. Amongst the very first laws enacted by its Legislature was the progressive reform for compulsory vaccination against smallpox — one of the earliest of such enactments in all the world and second only to that of Massachusetts.

Under the fine influence of the first President of the Kentucky State Medical Association, in called session here today, a progressive vital statistics law was enacted and this first President, Dr. Wm. L. Sutton, was the first registrar of vital statistics in the State This law was not very effective because of failure to make the necessary appropriations. It was, however, a start in the study of the causes of death that has resulted in the present excellence of public health and medical service for our people.

In 1874, the first law requiring qualifications for the practice of medicine was enacted. It was merely a start in the right direction and subsequent enactments and amendments in 1888, wisely enforced, have given to the people of Kentucky its present splendidly qualified medical profession. From the beginning, our people, through the General Assembly, have accepted the guidance of the organized medical profession in the enactment of medical and health laws. Wisely removed from political influence, this profession has made more progress than any other group and the greatest contribution to the efficiency and happiness of our people. One has but to read the pages of the early history and contemplate the ravages of the epidemic and endemic diseases that ravaged our popu-

*Delivered at Banquet of the Kentucky Pioneer Memorial Association, Harrodsburg, June 21, 1934.

lation, to realize the progress that has been made. When one realizes that when our health department was created in 1878 the average age of our citizens at death was twenty-nine and today it is fifty-nine, we recognize the wisdom of our lawmakers in placing the responsibility for the health and lives of our citizens squarely on the shoulders of qualified, trained medical men. Our people must continue to realize that unnecessary sickness and invalidism and premature senility and death are the most expensive wastes that can occur. They destroy not merely the property of our people, but their life's-blood. When one contemplates the increasing efficiency of medical and public health service, one realizes that the expenditure in dollars for the present high standard of these services is small compared with our previous extravagance in human effectiveness and human life. It is unquestionably true that a larger proportion of the people's dollars is now expended in public service along these lines, but it should be consistently remembered that our people are far more able to bear this relatively smaller expenditure than they formerly were to repair the ravages of unnecessary disease and death. After all, Kentucky's most important asset is the human beings that compose its citizenship. Its natural resources have been here for countless ages, but gave small satisfaction to the roving bands of savages who hunted through it. Our people must content themselves with the feeling that better education, better health and better institutions, will cost more dollars annually than they did when these services were not rendered at all, or rendered poorly, but they must understand that this necessary increase in the State's income and expenditure is reflected in increased happiness, usefulness and longevity for its citizens.

As Governor of the Commonwealth, I congratulate the Kentucky State Medical Association that it is gathered here to honor these brave and wise men, these pioneers in medicine in Kentucky. I am happy to extend to every member of this Association, from every thoughtful citizen of the State, its gratitude for service that entitles every one of its honorable members to be enrolled in a permanent Hall of Fame of faithful servants of its people.

## THE PIONEER DOCTORS OF KENTUCKY*

PHILIP F. BARBOUR, M. D.
Louisville.
Past President Kentucky State Medical Association.

We have met tonight to do honor to the memory of those brave and adventurous doctors who helped form the groundwork of our beloved state. It is not too much to claim that rarely if ever has such a small group of men rendered such world-wide service as they.

We are apt to look back upon the days of the pioneers with something of a supercilious air because of what we conceive to have been the simplicity of their lives and environment. Unless we dig into that past and with our imagination, reconstruct that period we shall fail to understand something of the miracle that it was.

The American Revolution had succeeded. Thousands of men whose attachment to home had been broken were leaving the older settled colonies and were tempting fortune over beyond the towering heights of the Alleghanies. Many of the states had given to the soldiers bounties of thousands of acres in the wilderness to the west. Certain hardy spirits had crossed the divide at Cumberland Gap and discovered the famous Blue Grass and here at Harrod's Fort had looked upon a landscape than which there is none fairer or more beautiful in the world.

The lure of its beauty and fertility spread through the Coastal States and with the close of the war great groups of people began to trek toward Kentucky. Travelling up the Shenandoah Valley from Pennsylvania and Maryland, crossing the mountain ranges of Virginia and coming up from the Carolinas these caravans congregated at Cumberland Gap and following along the Wilderness Trail, blazed by Daniel Boone, they reached Boonesboro and Harrod's Fort, and Danville and Lexington and Frankfort. These and other places grew apace. Shut off by the great mountain barrier of the Appalachian system they were isolated from the Mother State. Their interests, their problems, their commercial relations were with the peoples to the South and West and they felt that they must erect their own state, and so Kentucky was born in 1792.

Those were not days of inertia, of "otium cum dignitate." While the homespun clothes and the log cabin seem archaic there was high thinking with the plain living. There were great issues still to be fought out. Hamilton

*Delivered at the Banquet of the Kentucky Pioneer Memorial Association, Harrodsburg, June 21, 1934

at Fort Detroit with his blood thirsty Indian bands had to be conquered; George Rogers Clark and his devoted Kentuckians must free the west and make the homeland safe for the women and children.

Commerce up and down the Ohio and the Mississippi under the domination of the French and Spanish to the south must be freed of all foreign control. The Great Spanish Conspiracy abetted by Aaron Burr and others was dividing the communities and stimulating the mental activities of the citizens. Colleges were being founded, hospitals for the sick and for the insane, institutions for the blind, the deaf, the dumb were to be provided. Medical Schools came in response to the demand. Our forefathers were alive, alert, progressive; an indomitable self reliance and individualism made them adequate for the occasion. They were leaders, intense, ambitious, resolute, practical. So forceful were they that other states felt the impact and Governors, Senators, Judges that arose to power and influence, in the Western States owed Kentucky as their birth place, and eventually the names of Jefferson Davis and Abraham Lincoln were to symbolize the great division which rocked our Country and whose reverberations have lasted to our day.

Such were the people and the forces amongst which the pioneer doctor practiced his profession.

We are indebted to Mrs. Arthur McCormack, Mrs. George A. Hendon, Louisville and Mrs. W. T. Lafferty, Lexington, for the detailed history of the men whose names have have been placed upon this tablet. Every Name listed upon that bronze plaque did something which was vitally connected with the life of our Commonwealth. Many of the leaders had studied in Edinburg and Paris at the foremost medical schools of the world. Here and there they lived and wrought, and each contributed something over and above the daily task well done. They meant much in the communities in which they worked. The historians of our state have recorded what they did for their people. They were respected for their knowledge and education and personality. They wielded a great influence on the opinions of their neighbors and many of them in the Legislature helped formulate laws for the benefit of the people of our state. Many were forward looking men with a vision of great things to be done and with a determination that resulted in the fulfillment of many such ideals. While all of them deserve recognition, it is not invidious to select a few who have won more of the world's admiration and renown.

Dr. Ephraim McDowell, of Danville, stands out more prominently because of the dramatic quality of his work and the immeasurable worth of his contribution to womankind. He studied medicine at the Edinburg University with several other men who were also to become famous. It is interesting as showing early his bent of mind that he took his work in anatomy with the famous Dr. John Bell, who was not a member of the Faculty of the Medical School, and this may have been the reason why he did not receive his degree in medicine from that famous school. But he was profoundly affected by the personality and knowledge of Dr. Bell and felt its influence throughout his life, and it was to this Dr. Bell that he wrote the modest account of his first three ovariotomies.

It was many years before the Scientific Societies of Europe were forced to concede that a backwoods Kentucky doctor had the temerity and skill to operate successfully upon a tumor that they were afraid even to attempt to remove. All honor to the poise and self reliance of a man who acted upon his own convictions with no precedent to guide him. It is no wonder that he had become famous as a surgeon throughout the West. It was upon the morning of December 25, 1809 that the first successful ovariotomy was performed in Danville, Ky.

But what shall we say about the brave woman who faced certain death and whose courage has lightened the burden of countless sufferers since her day. Jane Todd Crawford merits all the fame that grateful womankind can confer upon her. That doctor and that patient gave a momentous Christmas Gift to the world.

We would not detract if we could from the glory of McDowell's achievement. It was not only an ovariotomy that was done, it was a revelation that the abdomen could be entered without too great danger and thus modern abdominal surgery owes him the debt for its origin. It may even be said that surgery of today with its aseptic technique does not show a very greatly reduced mortality in that particular field though the advance in the whole range of surgery is immeasurable. But surgery is so dramatic if not theatrical that fame has been generously awarded to other Surgeons such as Brashear who in 1806 performed the first successful amputation at the hip joint, and Benjamin Dudley who was remarkably adept in lithotomies. These brilliant achievements have overshadowed a less spectacular but really more important contribution to the welfare of mankind.

A pioneer whose name is barely known initiated preventive medicine in Kentucky and thus has saved untold thousands of lives.

It is the irony of fate that this marvelous contribution should have received so little recognition on the part of the profession itelf. Dr. Samuel Brown was in Edinburg at the same time that Dr. McDowell was there. While in England he learned of the recent discovery of Jenner. Realizing the value of this new idea of preventing smallpox, he popularized vaccination and in 1802 vaccinated over 500 people in and around Lexington; more than had been vaccinated in all England at that time or in this country. As a direct result of this measure the Kentucky Legislature some years later made vaccination compulsory upon all children before entering school. At that time one of every three people bore the marks of smallpox upon their faces and nearly one in ten died from the disease. It is impossible to calculate the saving of life and the prevention of suffering that resulted from this forward movement. One biographer of Dr. McDowell comments that Dr. Brown went to Edinburg with Dr. McDowell, but that his chief claim to fame was his saying that Eph McDowell had gone to Edinburg a gosling and returned a gander. But every State Board of Health in the United States, East as well as West, owes a great debt of gratitude to Dr. Sam Brown. They have not rendered him his due meed of praise, yet their very existence has been the outgrowth of this new conception of the possibility of the prevention of disease by organized effort of the State.

Dr. Brown also was instrumental in organizing, at Lexington, the Transylvania Medical School which was the first medical school west of the Alleghanies and indeed the second in the United States. Medical students from the Ohio and Mississippi Valleys came to Lexington and studied under these able men and so the gospel of good medicine was spread all over this country. But Dr. Benjamin Dudley was the real force and inspiration of this School and the pioneer educator in medicine. He was a remarkable organizer and brought many famous men into the faculty. Drs. Drake, Wilkinson, Estes and others caught the spirit and themselves started other famous Medical Schools. Dr. Dudley had a pleasing personality that endeared him to pupil and patient alike, and as long as he was active the old Transylvania Medical School was successful. Eventually Louisville had so outgrown Lexington that the faculty almost en masse decided to move to Louisville and found the Medical Department of the University of Louisville whose long service and honorable record is a source of pride to all Kentuckians.

As we look back through the vista of years we see these personalities towering like mountain peaks but after all they were individualists, and that day has passed. The metier of our day is not individualism but co-operation. Each one fits into a composite whole, the sum total of which is greater than all the past accomplished. We must work together that the span of life shall be lengthened many more years, that tuberculosis, and typhoid and diphtheria and cancer shall not take their toll of the young and old; that the mother and her baby shall be kept in health and strength and comfort and that our children shall have their chance for a sound mind in a sound body.

We are grateful for the glorious past but we look forward with hope and promise to the golden age when sickness and suffering shall be abolished, and we pledge ourselves to do our utmost for the consummation so devoutly to be desired.

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## THE PIONEER DOCTOR'S WIFE*

Mrs. B. K. Menefee, Covington
State President Woman's Auxiliary.

Mr. Toastmaster, Your Excellency Governor Laffoon, Ladies and Gentlemen,

The subject assigned to me for this occasion is rather a difficult one. Little mention is made of "The Pioneer Doctor's Wife" by the historians of that period, so that I found myself somewhat in the predicament of the little boy who was told by his teacher that he must write a composition. He said, "I can not. I do not know what to write." She said "Take for your subject baseball and write just what happened at the last game you attended." Johnnie's face brightened. He went to work and in a few moments he raised his hand for recognition, then told the teacher he had finished. He was asked to read what he had written; he read "Rain. No game."

My subject was not so easily disposed of and I am still fearful that I may not do justice to these wonderful women who have lived, worked and died. Their activities are hardly mentioned. Of the 27 men whose names are inscribed on the Memorial Tablet unveiled here today only the wives of 15 are mentioned; and they very casually. So that we must turn to the history of that period of time to learn of them in a general way, of the courage displayed by them, and of the hardships they endured.

Many of these heroic women were raised in comparative ease, some of them in luxury, in Old Virginia and Maryland. But, when

*Address delivered at the Banquet of the Kentucky Pioneer Memorial Association, Harrodsburg, June 21, 1934.

their husbands decided to adventure into new territory, they were ready to follow, bravely sharing the dangers and discomforts of the journey through the wilderness and enduring the hard ride that was entailed on this trip. The only mode of travel for these early settlers was on horseback following the "Trail" blazed by Dr. Walker and his party of men, which led over mountains, across rivers and through the thickly wooded country. Many days were spent making the journey. They could bring with them only the bare necessities of life, depending on the hunt, the wild fruit and berries for much of their food.

Upon arrival at their destination, land had to be cleared, houses built and the necessary furniture made—the first of which was crude indeed; stockades must be erected to protect them against attacks by the Indians, gardens must be made, using the precious seed brought from the old homes. After all these experiences they did indeed realize that "Kentucky was no longer a promise, but a possession, not an imagination, but a reality."

The number of useful Arts which the pioneer women had to learn were many and varied. The matter of preparing the meals for instance, would be a hardship—or so it seems to us. This was done on the open hearth. Imagine a large fireplace with a back log of buckeye with fore sticks of hickory resting on stone andirons; before the fire a Johnnie cake baking on a clean ash board; the frying pan on the fire, with its long handle resting on a split bottom chair, sending out its peculiar music caused by the frying of the meat; and the tea kettle singing its song, swinging from the lug pole, ready to brew the fragrant cup of tea. This with the addition of wild honey, and perhaps dried berries, was a typical meal. When this had been prepared a blast on a conch shell would call the family together, who, after prayer to God thanking him for all blessings received, and for the protection granted them. enjoyed the wholesome food thus prepared.

These early Pioneers were dependant to a great extent upon their own efforts for the clothing for the family. Soon, we find the spinning wheel and the loom in use. Flax for linen was raised. This had to be soaked in water quite a while, then broken, picked and made ready to spin, after which it was woven into cloth, then spread on the ground to bleach. This required many days of hard work. A little later we find them raising sheep that they might have the wool for warm clothing. This called for the art of dyeing. They learned to use the bark of trees; copperas; madder and indigo to dye the yarn before the cloth was woven. We feel that Proverbs Chap. 31 verses 10-31 effectively describes the activities of these wonderful women.

They were taught the use of fire arms and to make the bullets used in the muskets so that they could help to defend their homes and loved ones from the depredations of the Indians, a constant menace for many years. The Indians resented the coming of the white man into their hunting ground. We are told of one woman, who after her husband had been wounded, and ammunition exhausted, defended her home against an attack by the use of an ax, killing several Indians. They had tried to come down the chimney. She ripped open a feather bed, put it on the fire. Several were overcome by the smoke and fell down. These she killed with the axe. Another forced the door; he was cut on the cheek. Yelling, he made his escape and later told of the bravery of this white woman, and she was known by them as "Long Knife Squaw."

We find our pioneers making sugar from the sap of the maple trees and with this preserving the wild fruits and berries for winter use. Before the corn was fully matured, we find them grating it on a tin grater to make bread. Later the grist mills were in operation and the finest corn was used to make the meal.

The Church services were often held in the woods where puncheon seats were placed. The congregation gathered bringing their dinner and spent the day in worship and social enjoyment. Among the first books mentioned we find, The Bible, Bunyan's Pilgrims Progress and Watts Hymn Book.

Mothers, while about their daily tasks, taught their children the evil of being wicked; it was wicked to treat anything, which had life, with cruelty; it was wicked to neglect the cattle or forget the lambs in winter; it was wicked to waste bread or food of any kind; it was wicked to quarrel or strike any one without just cause; telling them the Bible forbids this, or commands that, God has said thus and so. And, thus by precept upon precept, these pioneer women taught their children to walk in "the straight and narrow path." We find them developing the social life, ever ready to extend hospitality to the stranger and aid to the unfortunate.

The first School teacher in Kentucky came with Dr. Hart from Maryland to Fort Harrod. She was Mrs. Jane Cooms, wife of William Cooms. Today, when we visited in the Fort, we tried to realize what it meant to be a teacher at that time.

Later we find these Pioneer Doctors and their wives, together with other settlers clear-

ing land and building homes through the wilderness. These homes were usually far apart, necessitating long, lonely rides for the Doctor and hours of anxiety for their wives who realized the dangers that would beset the loved one on all sides. Often the Doctor's home had to be opened to a patient who needed special care that could not be given otherwise, which gave the Doctor's wife additional responsibility. All these cares she bore for the love of humanity and to honor her husband.

The country was rapidly settled. Towns and cities sprang up and better days were at hand for our Pioneers. The burdens were lifted, the roads were improved, river traffic was instituted bringing to them needful articles and, soon, luxuries. Vehicles of various kinds were obtainable. The Indians were no longer such a menace and the life of The Pioneer Doctor's Wife was relieved of much of the tension of past years. I am sure that she was still a help and inspiration to her husband and vitally interested in the changing conditions, however.

In closing, may I leave with you the wonderful tribute paid to his wife by Dr. Drake, as I feel that he has expressed the sentiment of many men in these words:

"She was for years the repository of whatever arose in my soul, the partner of every emotion. She is now withdrawn behind the curtain of death leaving me, at once, rent asunder with feelings of grief, and destitute of those sympathies which alone could afford consolation.

For eighteen years we had been coalescing in spirit. Our hearts had been conjoined. The relation of the superior and inferior came not into the union. The great charm of her presence was simplicity. She devoted herself to every duty of her station. She rode with me in my gig while I was engaged in professional business; it was in fact a daily custom. She carried a book and read while I was occupied in the chamber of the sick.

A more devoted mother never lived. After her husband, all her solicitude, her ambition and her vanity were for her children. She loved them as candidates for excellence. Her care rose with her love and her correction multiplied with her admiration.

Few persons had equal skill in domestic economy. Her great aim was to make the means within her reach subservient to the wants and wishes of those for whom she had to provide the necessities and comforts of life."

I hope, that we, the Wives of the Doctors of the present day, may so live as to merit, in a small way at least, some such loving tribute.

## THE PIONEER DOCTOR*

C. C. Howard, M. D.

Glasgow.

President-Elect Kentucky State Medical Association

One hundred and fifty years ago, through Cumberland Gap, rode the pioneer Doctor of the Wilderness, with his saddle pockets and drugs. Courage, kindness, and a keen sense of observation were his outstanding attributes that bring us around this table tonight, to commemorate the lives of these men who lived in the starlight age of medicine. Laudanum was the only weapon against pain. The hypodermic syringe was invented forty years later. Bleeding vessels were controlled with cautery or linen. Hemostats were unknown. Anesthesia was still locked in the brain of a boy in Georgia. The cause of infection unsolved.

The science of medicine has developed wonderfully since that period of time, but the art of practicing medicine has never been improved upon. These men were individualists, but combined to organize the second medical school on this continent. Dear old Transylvania.

In the green hills just south of us was held a consultation that was the beginning of all our present day abdominal surgery. The story of Ephraim McDowell and Jane Todd Crawford should be in our public schools. "Two pioneer souls who blazed a path where highways never ran."

From this broadcasting station, we send this message out into the unknown, with the hope that these pioneers of old will tune in. To the pioneers of the dark and bloody ground: "We have kept the faith. Our prayer is to possess your courage and devotion."

## THE PIONEER'S WIFE*

Mrs. G. A. Hendon

Louisville.

It is difficult to determine to whom the most acclaim is due, or which is the greater hero of the two. It is indeed true there would have been no pioneering of any consequence without the female of the species which is considered more daring than the male.

It is women, not fools, who rush in where angels fear to tread. Without woman's abiding faith in Providence, there never would have been any challenge to the wilderness. It was woman's intuition that defied the unseen terrors of the trackless waste. It is the spirit

*Read before the Kentucky Pioneer Memorial Association, Harrodsburg, June 21, 1934.

and the will to sacrifice that rises supreme in woman's nature and digs the last ditch to live in, not to die in.

And when those hours came in which, as we say, to try men's souls, it was feminine devotion that halted the sun in his course and made them hours of light instead of hours of darkness.

It was either the voice of vision or the presence of his woman-kind that caused the heroes of that time to possess muscles of steel and nerves of granite in the decisive moment of a grave crisis.

Suffering and privation which only women have the fortitude to endure with sublime resignation, supplied the answer to the pioneer's prayer.

Time does not permit a detailed description of the activities of doctors' wives of that early period, but it is beyond question that whatever was required in courage, or duty, or labor, they furnished their share.

This occasion makes more significant the fact that Dr. Walker, the predecessor of Dan'l Boone, was the first to build a house in Kentucky, and he no doubt had his wife with him, else he would not have built a house.

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## THE MODERN PHYSICIAN'S WIFE*

Mrs. J. I. Greenwell

New Haven,

President-Elect Woman's Auxiliary.

Today the medical profession is faced with many problems and keeping in touch with these problems is like painting a picture, a veritable moving picture with a wonderful panorama of constantly changing scenery. Doctors' wives are expected to keep up with the advance in medicine, or, at least, to keep within hailing distance of it! Through our organization, the Woman's Auxiliary to the State Medical Association, we can best accomplish this. Here, we, the wives of present day physicians not only pledge our support to the profession but, by our endeavors to be useful, help to paint this picture using our brushes freely, sometimes daubing, perhaps but, may I suggest that we keep daubing? Art, too, advances.

Times have changed, are still changing. Many of us no longer remain so closely confined within our homes rocking the cradle: preparing food from farm or store to stove for hungry mouths; covering Johnny's trousers seat with a patch from Dad's old pants; bathing grimy little bodies; bandaging stubbed toes or kissing bruised heads along with putting an arm around the Doctor himself, when he is weary and discouraged, and, so on for 24 hours each day! Now, we are destined to occupy an important place in organized medicine as a sort of go-between for the physician and the general public. We are expected to interpret the purpose of the medical profession and be able to show the real value of the founding and development of the profession. Our imperative need, today, is an undistorted sense of values constructive in thought, logical in reasoning and sound in judgment, combined with common sense and good team-work. Service to the physicians in our individual County Societies who devote their lives to the service of all citizens is our key note as organized Auxiliary units.

Being a physician's wife is really a profession in itself, although it has never been listed as such. It is a hard profession, an exacting one, in fact, a delicate calling. In this profession, we are expected to use our own mental powers and, yet, hold our tongues. "Yes. We women do talk a lot. But, we never tell all we know."

Aside from our duties to God, to our Church and other organizations, may I mention the insistent telephone and the doorbell! These often call for quick thinking and sometimes I long for "second sight." Midnight calls for the doctor mean midnight calls for us, as well. Every wife must see if her hubby has his rubbers when it is raining, and, his overcoat if stormy, and countless other necessities for his comfort and well-being. And, do we not assume, also, burdens of anxiety and worry over the dangerously ill patients in our attempt to lighten the load on the doctor's shoulders and show him our sympathetic interest?

Stories, sentimental and cynical, have been written about the doctor. But—where is the story about the doctor's wife? No history or glorification has been accorded the doctor's help-meet, yet, many times have her gallant service and heroic acts been the means of saving life. The doctor has been cannonized on canvas and in bronze. Hospitals, parkways, boulevards and libraries have been dedicated to him; poets and philosophers have, in rhyme and prose,—sometimes in lumbering language—made him a little more than a mortal and a little less than a god. And—rightly so he deserved all the recognition we can give him for his good work. But—what of the doctor's wife? She is not written in song and story; she is not commemorated. Yet, her life, to, is consecrated to service and, inevitably, she sacrifices

*Toast at the Banquet of the Kentucky Pioneer Memorial Association, Harrodsburg, June 21, 1934.

much, not of her personal comfort and pleasure, alone, but also the sacrifice of her husband's counsel and help so needed in the care of their own children and of their own home affairs while he attends to the wants of his patients.

Without reward, without professional recognition, the doctor's wife stands by him, and by his profession, tugging, lifting, straining, comforting, urging on, higher and higher for greater service. And, all this, she gives aside from the miracle of all miracles, the Miracles of Motherhood. Yet, when reference is made to the great men who have developed medicine—Pasteur, Lister, Jenner, McDowell and others, no mention is made of their wives. I cannot believe that this is studied neglect. It may be an oversight, that some day will be corrected. For, although not mentioned nor implied in chronicles concerning our noted men, the wife is the mirror-goddess of the doctor's life, reflecting and directing his earnest, humble effort to be serviceable to his fellow-man in the magic manner which makes, of every doctor, A Great Man.

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A. T. McCormack, M. D.

Secretary, Kentucky State Medical Association, who gave the Dedicatory Address

THE COUNTRY DOCTOR

Read by Mrs. Eleanor Hume Offutt, Frankfort.

There's a gathering in the village, that has never been outdone
Since the soldiers took their muskets to the war of 'sixty-one;
And a lot of lumber-wagons near the church upon the hill,
And a crowd of country people, Sunday-dressed and very still.
Now each window is pre-empted by a dozen heads or more,
Now the spacious pews are crowded from the pulpit to the door;
For with coverlet of blackness on his portly figure spread
Lies the grim old country doctor, in a massive oaken bed.
Lies the fierce old country doctor,
Lies the kind old country doctor,
Whom the populace considered with a mingled love and dread.
Maybe half the congregation, now of great or little worth,
Found this watcher waiting for them, when they came upon the earth;
This undecorated soldier, of a hard, unequal strife,
Fought in many stubborn battles with the foes that sought their life.
In the night-time or the day-time, he would rally brave and well,
Though the summer lark was fifing, or the frozen lances fell;
Knowing if he won the battle, they would praise their Maker's name,
Knowing if he lost the battle, then the doctor was to blame.
'Twas the brave old virtuous doctor,
'Twas the good old faulty doctor
'Twas the faithful country doctor, fighting stoutly all the same.
When so many pined in sickness, he had stood strongly by,
Half the people felt a notion that the doctor couldn't die;
They must slowly learn the lesson how to live from day to day,
And have somehow lost their bearings—now this landmark is away.
But perhaps it still is better that this busy life is done:
He has seen old views and patients disappearing one by one;
He has learned that death is master both of Science and of Art;
He has done his duty fairly, and has acted out his part.
And the strong old country doctor,
And the weak old country doctor,
Is entitled to a furlough for his brain and for his heart.

Will Carleton.



IRVIN ABELL, M. D.
Louisville.
Toastmaster



C. C. HOWARD, M. D.
Glasgow
President Kentucky State Medical Association



DR. C. A. VANCE
Lexington
Chairman of the Council, who accepted the Doctor's Shop



PHILIP F. BARBOUR, M. D.
Louisville
Past President Kentucky State Medical Association

# THE PIONEER PHYSICIAN

By C. B. VanArsdall, M. D., Harrodsburg.

Close on the heels of Boone and Harrod came the pioneer physician into the western wilds. He was as different from the physician of today as you are different from the settlers of 1774 to 1800. And yet, was he, and are we, so different, after all? In outward equipment and life, yes; but in the heart, no.

Let us take a look at him for one day of his primitive professional experiences. Starting from his own log cabin he travels, not a smooth highway, but an almost unbeaten path to the fort or station or isolated cabin where his services are in demand. His drugs are in large part herbs, gathered by his own hands, a few brought at great expense and trouble from the mother states. He is a surgeon as well as physician, but his instruments are few in number and crude in design. He travels on horseback, as does his companion, the circuit-rider, with his saddlebags to protect his precious stock. He enters a cabin home that knows nothing of hygiene—dark, crowded, disease-infested. Ignorance and superstition are the substitutes for the sanitation and nursing of our day. Epidemics are considered the act of God, and not to be prevented by feable man. Even his own drugs are nauseous and often impure.

Yet this man faces the task before him with a resolute spirit, because he is the only help for the sick. His education is imperfect, but he has a store of knowledge that he can and does know how to use. His equipment is meagre, but fewer drugs may be better for the patient. His sick are ignorant, but they are usually strong in body and inured to pain and hardship.

How did he ever succeed? Lacking in medical training, he used his own practice as a hospital experience. With no drug store he gathered his own medicines or imported them from the Eastern Colonies. Without nurses he made use of the willing hands of the nearest neighbor. He fashioned his own splints, he made his own bandages. He met superstition and ignorance with common sense.

And he succeeded. Not that he became rich or famous. But he met the hard problems of life, for himself and his people, with a cool head and a stout heart, lessening the suffering he could not prevent, standing with his cabin friends to face unafraid the death he could not stay.

In his heart was that love for his fellow-man that willingness to sacrifice his own comfort for others, that in all ages has distinguished the true physician. Of earthly comforts he had few, even as his neighbors, but in possessions of love, of trust, of honor, of all that makes the inner life worth living, he had an abundance.

Could he only have looked to the future, to the century that was to follow, the century of which Osler said, "In the fulness of time, long expected, long delayed, at last Science emptied upon him from the horn of Amalthea blessings which cannot be enumerated, blessings which have made the century forever memorable; and which have followed each other with a rapidity so bewildering that we know not what next to expect." "There is no one measure which can compare with the decrease of physical suffering in man, woman, and child when stricken by disease or accident."

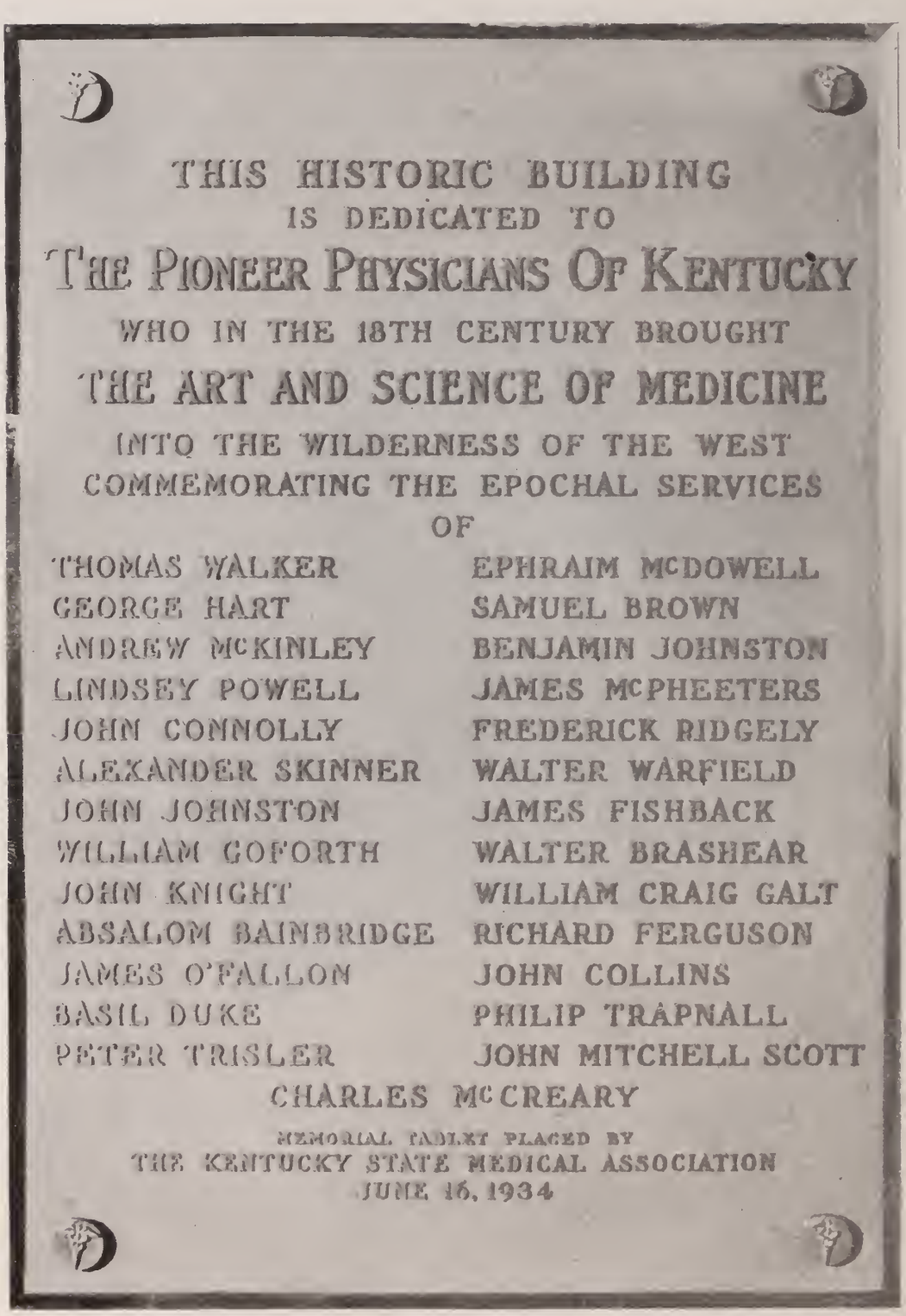
"With the irrevocable past into which they have gone lies our future, since our condition is the resultant of forces which, in these (intervening) generations, have moulded the profession of a new and mighty empire."



REPRODUCTION OF DR. WALKER'S CABIN



**DR. THOMAS WALKER**
(1715-1794)
First Explorer of Kentucky (1750)
Discovered and named Cumberland Mountain, Gap and River


THIS HISTORIC BUILDING
IS DEDICATED TO
THE PIONEER PHYSICIANS OF KENTUCKY
WHO IN THE 18TH CENTURY BROUGHT
THE ART AND SCIENCE OF MEDICINE
INTO THE WILDERNESS OF THE WEST
COMMEMORATING THE EPOCHAL SERVICES
OF
THOMAS WALKER
GEORGE HART
ANDREW McKINLEY
LINDSEY POWELL
JOHN CONNOLLY
ALEXANDER SKINNER
JOHN JOHNSTON
WILLIAM GOFORTH
JOHN KNIGHT
ABSALOM BAINBRIDGE
JAMES O'FALLON
BASIL DUKE
PETER TRISLER
EPHRAIM McDOWELL
SAMUEL BROWN
BENJAMIN JOHNSTON
JAMES McPHEETERS
FREDERICK RIDGELY
WALTER WARFIELD
JAMES FISHBACK
WALTER BRASHEAR
WILLIAM CRAIG GALT
RICHARD FERGUSON
JOHN COLLINS
PHILIP TRAPNALL
JOHN MITCHELL SCOTT
CHARLES McCREARY
MEMORIAL TABLET PLACED BY
THE KENTUCKY STATE MEDICAL ASSOCIATION
JUNE 16, 1934

BUILDING DEDICATED TO PIONEER PHYSICIANS
In Pioneer Memorial State Park



THE DOCTOR'S SHOP

THE FATHER OF OVARIOTOMY
December 25, 1809



DR. EPHRAIM McDOWELL

FATHER OF SMALL POX VACCINATION
IN KENTUCKY



DR. SAMUEL BROWN

FATHER OF HIP JOINT AMPUTATION
Bardstown, August, 1806



DR. WALTER BRASHEAR

## DR. McDOWELL'S DOOR KNOCKER

Mrs. Amelia Cowling Jungbluth
Louisville.

The following address was delivered by Dr. Richard Oswald Cowling, the distinguished surgeon, who died at the age of 42 in 1881 in Louisville, Ky. To quote the words of his colleague and devoted friend, Dr. David W. Yandell, in writing of Dr. Cowling's life:

"The last address he ever gave has been read and admired by medical men everywhere. It was made when a monument was erected at Danville, Kentucky, under the auspices of the Kentucky State Medical Society over the grave of Dr. Ephraim McDowell, the father of ovariotomy.

"The occasion was one of extraordinary interest. The audience by its very size was imposing, and was made still more so by the elements which entered into its composition. On the platform sat the Governor and other officers of the State; divines, jurists, and senators, among whom were orators of national fame; the president and other officers of the State Medical Society; the president-elect of the American Medical Association besides physicians of distinction who had traveled great distances to take part in the ceremonies. The body of the building was ablaze with the beauty of the State. The orator of the evening was Dr. Samuel D. Gross at whose feet Dr. Cowling sat when a student of medicine, and whose former chair in the University of Louisville he had just come to occupy. The illustrious Pennsylvanian had spoken in fitting terms of the most renowned of all Kentuckians. Dr. Cowling had been selected by the society to present to Dr. Gross the knocker which once hung on Dr. McDowell's door. He rose, and turning to his beloved master, said, 'Dr. Gross, the Kentucky State Medical Society thanks you for the beautiful oration you have just delivered on Ephraim McDowell. Surely hereafter, when history shall recall his deeds and dwell upon his memory, it will relate how, when he was fifty years at rest, the greatest of living surgeons in America came upon a pilgrimage of a thousand miles to pronounce at his shrine the noble words you have spoken. . . . I wish that the magician's wand were granted me to weave a fitting legend around this door-knocker, which comes from McDowell to you, Dr. Gross. There is much in the emblem. No one knows better than you how good and how great was the man of whom it speaks. It will tell of many summons on mercy's mission which did not sound in vain. Ofttimes has it roused to action one whose deeds have filled the world with his fame. A sentinel, it stood at the doorway of a happy and honorable home whose master, as he had bravely answered its signals to duty here below, so when the greater summons came, as trustfully answered that, and laid down a stainless life.' And raising his tall form he added this feeling and beautiful tribute to Dr. Gross. 'It belongs by right to you, Dr. Gross. This household genius passes most fittingly from the dearest of Kentucky's dead surgeons to the most beloved of her living sons in medicine. She will ever claim you as her son, Dr. Gross, and will look with jealous eyes upon those who would wean you from her affections. And as this emblem which is now given to you hangs no longer upon a Kentucky doorway, by this token you shall know that all Kentucky doorways are open at your approach. By the relief your skill has wrought; by the griefs your great heart has healed; by the sunshine you have thrown across her thresholds; by the honor your fame has brought her; by the fountains of your wisdom at which your loving children within her borders have drunk, the people of Kentucky shall ever open to you their hearts and homes.'

"The effect of these words, uttered in the deep, sonorous voice of the speaker, was thrilling. It was some moments before the eminent surgeon to whom they were addressed was able to rise and reply."

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## THE McDOWELL MONUMENT

The newspapers carry an astounding item from Washington that there is a possibility of the removal of the state of Doctor Ephraim McDowell from Statuary Hall. The medical profession and people of Kentucky are naturally very much alarmed and outraged at this suggestion. Doctor McDowell's name was selected as one of the two to represent Kentucky by a distinguished committee after several years' study. The committee unanimously determined that Doctor McDowell's recognition as the first ovariotomist, making him practically the founder of the whole school of modern surgery, entitled him to this world-wide recognition. Since he performed the epochal operation in Danville in 1809 tens of thousands of women have been saved by it from the slow torture and the terrible death which had been the common lot of those of their sex similarly afflicted throughout the ages.

The names of those in history who have benefited the human race to the same extent as Doctor McDowell could be counted on the fingers of one person's two hands. The removal of his statue from Statuary Hall would be an outrage and the JOURNAL suggests that our readers write immediately to Senator A. W. Barkley, Chairman of the Committee.

on Libraries, U. S. Senator, at Washington, and to Hon. David Linn, the architect of the Capitol, urging the retention of Doctor McDowell's statue in its proper place.

## PIONEER PHYSICIANS IN KENTUCKY

### DR. THOMAS WALKER
(1747-1749-1750)

Dr. Thomas Walker (1715-1794) of Albemarle County, Virginia, left his home, March 6, 1749-50, "having on the 12th of December last, been employed for a certain consideration (with the Loyal Land Company) to go to the Westward in order to discover a proper place for a Settlement . . . . in company with Ambrose Powell, William Tomlinson, Colby Chew, Henry Lawless and John Hughs. Each man had a horse and we had two to carry baggage." Entered a cut in the mountains which Dr. Walker named Cumberland Gap, April 13, 1750, at a place about four miles from the present town of Barbourville, Knox County. On April 28th, they "had built an house, 12x8, cleared and broke up some ground and planted corn and peach stones. They also had killed several bears and cured the meat." This was the first house built in Kentucky by a white man. Dr. Walker, leader of this surveying party, frequently had to prescribe for both man and beast, not unlike the emergency requirements of the Frontier Nurses in Leslie County today. Dr. Walker, a close observer, was constantly on the alert for medicinal herbs, plants and springs.[1]



Dr. JOHN CONNOLLY

### DR. JOHN CONNOLLY
(1773)

Dr. John Connolly, late a Surgeon's Mate in the General Hospital of our Forces in America. December 10, 1773, Lord Dunmore conveyed to John Connolly, a grant of land, 2000 acres, in and around the Falls of the Ohio (comprising much of what was later known as Portland and Shipping Port). Surveyed by Capt. Thomas Bullitt.[2]

### DR. GEORGE HART
(1775)

Dr. George Hart (or Hartt) (17—), an Irishman, came from Maryland to Fort Harrod, with William Coomes and his wife, Jane. The latter was the first school teacher in Kentucky. Dr. Hart was the first practicing physician in Kentucky. Dr. Hart moved from Harrodsburg to Jefferson County and, in 1779, was one of the signers for the petition for the settlement of Louisville. Dr. Hart did not remain long in Louisville but moved to Nelson County, where he died and was buried in the cemetery at the Cathedral. Dr. Hart, or his son, gave the land for the Cathedral and the cemetery. He was the first Catholic buried in Kentucky.[3]

### DR. ANDREW McKINLEY
(177—)

Dr. Andrew McKinley (17—1786) from Culpepper County, Virginia, was the first physician at Logan's Fort, also known as St. Asaph's Fort, now Stanford, in Lincoln County. He married Mary Logan. Judge John McKinley, Advocate Justice, U. S. Supreme Court, was their son.[4]

### DR. LINDSEY POWELL
(177—)

Dr. Lindsey Powell was probably the third practicing physician in Lincoln County. He came to Carpenter's Fort, 2½ miles west of Hustonville, and practiced in Lincoln County and what is now Casey County. Married Margaret Carpenter, February 24, 1798.[5]

### DR. ALEXANDER SKINNER
(1784)

Dr. Alexander Skinner followed Dr. Hart to Louisville. "Excellent physician." Stickler for professional terms. Loved to use Latin. Great "cusser." Indicted for profanity, May 1794.[6]

### DR. JOHN JOHNSTON
(1785)

Dr. Johnson moved to that town (Washington, Mason County) in 1785, from Salisbury Connecticut, and is remembered by the old inhabitants as the favorite physician of his neighborhood—a man of "talents, acquirements and integrity." He was the father of

Gen. Albert Sidney Johnston and of Josiah Stoddard Johnston.[7]

### DR. WILLIAM GOFORTH
(1788)

Dr. William Goforth practiced in Washington and Maysville, Mason County, until 1800 when he went to Cincinnati, where Daniel Drake came to him to study. Dr. Goforth had migrated with the Drakes from Shotwell, New Jersey, in 1788, when Daniel was but a small child.[8]

### DR. JOHN KNIGHT
(1788)

Dr. John Knight (1751-1838) came to Shelby County and settled in 1788" on a farm. "His fame as a surgeon rests on the fact that he performed the first successful operation for cancer." Born in Scotland, 1751. Arrived Philadelphia, 1773. Surgeon's Mate in 9th Virginia during Revolutionary War. With Col. Crawford on unfortunate expedition. Joined Crawford at Mingo Town on Ohio, May 1782. Witnessed Crawford's cruel death and barely escaped a like death, himself. Married Miss Stevenson, niece of Col. Crawford, at close of the War. One son, Dr. Joseph Knight, practiced in Philadelphia. Dr. John Knight was a member of the House of Representatives from Shelby County, 1796.[9]

### DR. ABSALOM BAINBRIDGE
(1790)

Dr. Absalom Bainbridge, my great-grandfather, Dr. Absalom Bainbridge, who came to Louisville from his native city of Fredericksburg, Virginia, in the year 1790. He resided on Jefferson street, between 7th and 8th streets, on the westerly part of the lot now occupied by the aforementioned "Bainbridge Row" of houses. After practicing for some years, he died in the early part of the 18th Century."[10]

### DR. JAMES O'FALLON
(1791)

Dr. James O'Fallon was an army surgeon who came from Ireland. Married Fannie Clark, sister of Gen. George Rogers Clark, at home of her father, John Clark, at Mulberry Hill, in what is now a part of Camp Taylor, Louisville, on February 21, 1791. Dr. O'Fallon was one of the early practicing physicians in Louisville and, probably, was the first to do "contract medicine" here. Later, it is probable, Dr. O'Fallon moved to Fayette County, near Lexington.[11]

### DR. BASIL DUKE
(1791)

Dr. Basil Duke (1766-1828) settled in Lexington in 1791 and developed large practice. Born in Calvert, Maryland; studied medicine at Baltimore. Married Charlotte, daughter of Col. Thomas Marshall of Woodford County. Removed in 1798 to Mason County. "At the head of his profession in that part of Kentucky, his practice for the greater part of his life was large and laborious, extending over Mason and the adjoining counties. His kind and benevolent character endeared him to the people, to whom his medical services rendered him greatly useful." Died, Washington, Mason County 1828.[12]

### DR. EPHRAIM McDOWELL
(1795)

Dr. Ephraim McDowell (1771-1830.. returned from studying medicine at Edinburgh, to Danville, Kentucky, and entered at once upon the practice of medicine. In 1809, on December 25th, Christmas Day, he performed the first ovariotomy known in history upon Mrs Jane Todd Crawford, of Green County, Kentucky. This experiment was a complete success and the patient, undergoing the terrible ordeal without anaesthesia, recovered, and lived a useful life for 32 years and 3 months after the operation. She died in March, 1842, at the age of 78. Dr. McDowell performed the operation of ovariotomy upon thirteen patients.[14]

### DR. PETER TRISLER
(1791)

Dr. Peter Trisler was the first practicing physician in Jessamine County. Born in Whittenberg, Germany, he came first to Hagertown, Maryland. Then, in 1791, he settled on Jessamine Creek, in Jessamine County, Kentucky, as the first practicing physician for that county. He belonged to the Moravian Colony (United Brethern). Dr. Trisler had other talents and "was something of a medium and fortune teller and practiced these arts in addition to medicine." With him, from Germany, Dr. Trisler brought a Bible that was "probably 400 years old," and "several German medical books written in 1442." These are, perhaps, still in the hands of the Cawbey and Horine families.[15]

### DR. BENJAMIN JOHNSTON
(1791)

Dr. Benjamin Johnston (1717-1797) removed to Louisville with his family in 1791. He was the father of William Johnston, the immigrant with Gen. Clark in 1778 and first clerk of Jefferson County. Dr. Johnston was the grandfather of Dr. James Chew Johnston. A daughter of Dr. Benjamin Johnston married Major John Harrison and their son Hon. James Harrison, the well-known Louis-

ville lawyer, lived to be more than 80 years of age. Dr. Benjamin Johnston lived on the corner of Main and Sixth streets, Louisville where he died about six years after his arrival, in 1797. Most of his descendants live in Indiana and Illinois.[16]

## DR. JAMES McPHEETERS
(1795)

Dr. James McPheeters (1765-1799) was the first physician in Cynthiana. Dr. McPheeters was born May 5, 1765. Studied medicine in Staunton, Virginia. Afterwards attended lectures by Dr. Rush in Philadelphia. Married his cousin, Elizabeth Coulter, May 25, 1791. Practiced medicine for 10 years in and near Fincastle, Botetourt County, Va. Removed in 1795 to Cynthiana, where he practiced until 1799. "He was sick a lot and lost his eyesight but recovered enough to practice." Died November 9 1799.[17]

## DR. FREDERICK RIDGELY
(1799)

Dr. Frederick Ridgely (1756-1854) came to Kentucky from Maryland and was made Professor of Materia Medica at Transylvania in 1799, Midwifery and the Practice of Physic. Colleague of Dr. Samuel Brown, with whom he was "the first who taught medicine by lecture in Western America.[18]

## DR. WALTER WARFIELD
(1799)

Dr. Walter Warfield was a practicing physician of Lexington; made a professor of Midwifery, in addition to Dr. Samuel Brown at Transylvania. Dr. Warfield did not long occupy this chair and appears not to have lectured in it.[19]

## DR. WALTER BRASHEAR
(1799)

Dr. Walter Brashear (1776-1860) read medicine under the tutelage of Dr. Frederick Ridgely, at Transylvania, Lexington, for two years. Then he studied at Philadelphia. In 1799 he went to China as a surgeon on a vessel. While there he operated upon a woman for cancer of the breast. Successful but had to remain three days to satisfy the Chinese his life need not be forfeited for hers! He returned to practice in Kentucky. Performed the first major operation in the State —amputation at hip of mulatto boy—Bardstown, August, 1806. Drs. Burr Harrison John Goodtell assisted. Married Miss Margaret Barr, Lexington, in 1802. Died Oct 23, 1860, and sleeps in his adopted State, Louisiana.[20]

## DR. JAMES FISHBACK
(1799)

Dr. James Fishback (17—-1854) was a D. D. as well as an M. D. Whether or not he was in active practice in Lexington by or before 1800, has not been definitely ascertained but, when appointed "Professor of Theory and Practice of Physic" in the Medical College at Transylvania in 1805, he is recorded as "a physician in good practice." He seems to have been a quite remarkable citizen. "An able writer, an influential lawyer and an upright man" as well as a physician. He was elected representative to the General Assembly of Kentucky in 1808. He wrote many scholarly articles. He was a preceptor in medicine and, for a time partner in the practice of the celebrated surgeon, Benjamin Dudley. (Dr. Fishback was the son of Jacob Fishback who came from Virginia to Kentucky in 1783)[21]

## DR. WILLIAM CRAIG GALT
(179—)

Dr. William Craig Galt (1777-1853) son of John Minson Galt, Surgeon General of the Virginia forces in Revolutionary War Dr. Galt was born in Williamsburg, Virginia April 8, 1777, and emigrated to Kentucky "toward the close of the 18th Century," settled in Louisville. "No physician here when he arrived." Great need for physicians so he induced his cousin, Dr. Richard Ferguson "to come to Louisville and settle" Dr. Galt was General George Rogers Clark's physician during his last illnesses. The first Galt House was built on site of his home. Died Oct. 22, 1853, Louisville, and is buried in Cave Hill Cemetery. His son, Norbourne A. Galt, was also a physician and practiced in Louisville. Dr. W. C. Galt was one of the five managers of the Louisville Library, incorporated by act of the Kentucky Legislature, 1816. This was the beginning of the several library projects that later developed into the present Louisville Free Public Library. He was also one of the incorporators of the Medical Institute of Louisville, chartered February 2, 1833.[22]

## DR. RICHARD FERGUSON
(179—)

Dr. Richard Ferguson (1778-1853) of Londonberry, Ireland, came to America in 1772 and settled in Virginia but moved to Louisville in 1803, according to statement in Biographical Encyclopedia, 1878, p. 316. But according to statement in history of Ohio Falls Counties, p. 214, he arrived in 1802 Dr. John Breckinridge Richardson says of him in his paper, Some Earliest Professional


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Memories, June 1900; " . . . Dr. Richard Ferguson was born in Ireland and came to Louisville about 1802, and, after a long and useful professionl career, died in 1853. I remember having seen him frequently at my father's residence and office. He was a gentleman possibly six feet and one inch in height, broad-shouldered, very erect of carriage and had very white hair, and wore no beard; his manner was gentle and quiet, very noticeable in one so gigantic and imposing. He had his office on the west side of Third Street, between Market and Main Streets, and his residence was on Market Street between Second and Third Streets, North side." It was Dr. Ferguson who amputated the right leg of Gen. George Rogers Clark, in March, 1809 while fifers and drummers marched around the house and played during the entire two hours of the operation. Dr. Ferguson was assisted by Dr. John Collins.[23]

## DR. JOHN COLLINS

(179—)

Dr. John Collins was the son of Lemuel Collins. He practiced medicine in Louisville and assisted Dr. Richard Ferguson in the amputation of the right leg of Gen. George Rogers Clark in March, 1809. Dr. Collins married Mrs. Eliza Johnston, widow of William Johnston, deceased. The license was issued January 8, 1808, returned same date. The minister was Reverend James Vance, a Presbyterian. The Bondsman was John Bustard. In his will, dated September 2, 1813 Dr. Collins left to his stepson, Dr. James Chew Johnston, his stock of medicine, library and shop furniture. Dr. James Chew Johnston was born in the summer home on a farm of his father, William Johnston (first Clerk of Jefferson County) located on the site of Cave Hill Cemetery.[24]

## DR. PHILIP TRAPNALL

(1800)

Dr. Philip Trapnall (1773-1853) came to Harrodsburg where he did an extensive practice in 1800. Dr. Trapnall collected a large medical library which he divided among young professional friends after he retired. Dr. Trapnall was born January 4, 1773, in Baltimore County, Maryland. Originally, the Trapnalls came from England. He married Nancy Carey, of Mercer County. He died January 31, 1853. He was a member of the Kentucky Legislature from Mercer County 1805-6.[25]

## DR. JOHN MITCHELL SCOTT

(1796)

Dr. John Mitchell Scott (1764-1812) in Franklin and Woodford Counties in 1796. Died at the age of 48. Buried in Frankfort cemetery, Frankfort, Ky. He married Miss Catherine (Kitty) Ware, daughter of Dr. James Ware, Jr., born 1741, who in 1791 removed with his family from Gloucester County, Virginia, to Fayette County, Kentucky, and practiced there for many years.

Dr. John M. Scott was sheriff of Franklin County at the time of his death in 1812.[26]

## DR. CHARLES McCREARY

(1813)

Dr. Charles McCreary, of Hartford, Ohio County, exsected the clavicle of a 14-year-old boy for scrofulous disease. Patient survived without recurrence for 35 years. A member of the House of Representatives from Ohio County in 1809.[27]

## DR. SAMUEL BROWN

(1799)

Dr. Samuel Brown (1769-1830) became Professor of Chemistry, Anatomy and Surgery, University of Transylvania in 1799. However, he had practiced before this date in Kentucky. Smallpox vaccination record is still outstanding. In Edinburgh with Dr. Ephraim McDowell.[13]

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10. Some Earliest Professional Memories, by Dr. John Breckinridge Richardson. Read before The Filson Club, June, 1900, and before the Clinical Society, Louisville, December 3, 1901.

read and approved and other business of the Society was discussed.

Following the meeting, luncheon was served at the hotel.

W. S. SNYDER, M. D., Secretary.

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### IN MEMORIAM

**Dr. Robert Benjamin Ginn**

WHEREAS, In His Divine Wisdom, God Almighty has seem fit to remove from our midst Dr. Robert Benjamin Ginn, at his home at Honeysuckle, June 29th, 1934 in his 63rd year.

Dr. Ginn was educated at Georgetown College and The Kentucky School of Medicine, Louisville, receiving his M. D. degree in 1893, and for 41 years faithfully practiced his profession in this community and at one time served this Society as its President and was one of its most loyal and enthusiastic members, and

WHEREAS, His services to the community in alleviating human suffering were of such character that his untimely passing will be keenly felt by the entire community.

THEREFORE, Be it resolved by this Society that it pause in its deliberations to pay tribute to his high and noble instincts, his unimpeachable integrity, his intelligence, his character and his unselfish devotion to his profession and to his fellow man.

BE IT FURTHER RESOLVED, that a copy of these resolutions be sent to his family, consisting of his widow and three sons, and that a copy be prominently transcribed upon the minute books of this Society. Also that a copy be sent to the Kentucky State Medical Journal for publication.

Committee:

W. S. SNYDER, JR, M. D.
L. T. MINISH, M. D.
JOHN PATTERSON, M. D.

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**Franklin:** The first regular fall meeting of the Franklin County Medical Society was held September 12, 1934, at the Capital Hotel. In the absence of the President and Vice-President, the meeting was presided over by Dr. C. T. Coleman.

Those present were: L. T. Minish, Grace Snyder, W. S. Synder, E. K. Martin, M. C. Darnell, C. T. Coleman, B. B. Baughman, F. M. Travis, Jno. Patterson, E. W. Frymire. Invited guest, W. P. Blackburn.

The scientific program was dispensed with and the entire meeting was given over to the discussion of important business.

A committee consisting of Dr. L. T. Minish, Dr. W. S. Snyder and Dr. Jno. Patterson was appointed to draw up resolutions on the death of Dr. R. B. Ginn and to send a copy of such resolution to the family of the late Dr. Ginn and to publish a copy in the Kentucky State Medical Journal.

A second committee consisting of Dr. C. T. Coleman, Dr. E. K. Martin and Dr. F. M. Travis was appointed to meet with the Red Cross executive officers to discuss the amount of charity work that both organizatoins are being called upon to do and to discuss other questions that have arisen in the work done by the Medical and Social organization.

Dr. Grace Snyder was appointed to interest the wives of the local physicians in reorganizing their chapter of the Woman's Auxiliary to the Kentucky State Medical Association.

The Society voted to co-operate with the American Birth Control League, by inviting to one of its future meetings a guest speaker from the Kentucky Birth Control League affiliated with the National organization.

The Society voted into membership Dr. W. P. Blackburn and Dr. R. D. Barton.

Following the business session the members adjourned to the hotel dining room for lunch.

W. S. SNYDER, JR., Secretary.

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**Henderson:** Henderson County Medical Society met September 10, 1934 at the Henderson Hospital.

The meeting was filled with discussion of the Providence Encephalitis epidemic, Medical Laws in various states and local nuisances to Medical Practice.

W. L. O'NAN, Secretary.

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**Jefferson:** The November 19th program will be held as usual in the City Hospital and any member of the Kentucky Medical Association who is in Louisville at this date, is cordially invited to attend. The scientific program begins at 8:15 P. M. and is as follows:

An Unusual Case of Anemia, by Margaret Hatfield, M. D.

The Relation of Trauma to the Diseases of the Nervous System, by J. J. Moren, M. D.

The Society regrets the loss of its valuable member, J. P. Ferguson, M. D., who passed to the beyond October 8.

The Society voted a debt of thanks to the Milk Commission for the gift of an Addressograph machine.

C. M. EDELEN, Secretary.

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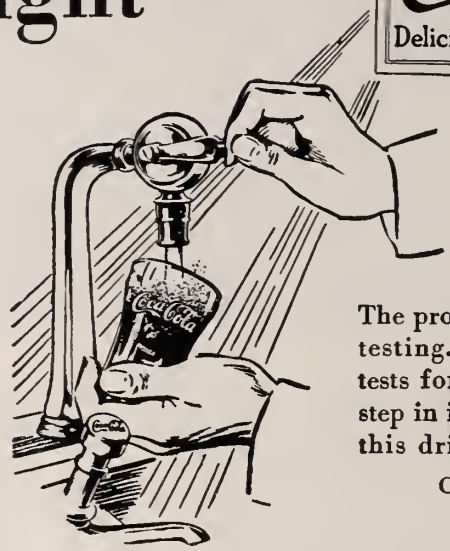
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## CALENDAR OF COUNTY SOCIETY MEETINGS

| COUNTY | SECRETARY | RESIDENCE | DATE 1934 |
|---|---|---|---|
| Adair | N. A. Mercer | Columbia | December 5 |
| Allen | A. O. Miller | Petroleum | December 26 |
| Anderson | J. B. Lyon | Lawrenceburg | December 3 |
| Ballard | F. H. Russell | Wickliffe | December 11 |
| Barren | Paul S. York | Glasgow | December 19 |
| Bath | H. S. Gilmore | Owingsville | December 10 |
| Bell | J. G. Foley | Pineville | December 14 |
| Boone | R. E. Ryle | Walton | December 19 |
| Bourbon | W. B. Hopkins | Paris | December 20 |
| Boyd | R. G. Culley | Ashland | December 4 |
| Boyle | P. C. Sanders | Danville | December 11 |
| Bracken | J. M. Stevenson | Brooksville | December 3 |
| Breathitt | O. M. Goodloe | Jackson | December 18 |
| Breckinridge | J. E. Kincheloe | Hardinsburg | December 13 |
| Bullitt | S. H. Ridgeway | Shepherdsville | December — |
| Butler | G. E. Embry | Morgantown | December 5 |
| Caldwell | W. L. Cash | Princeton | December 4 |
| Calloway | A. F. Russell | Murray | December 6 |
| Campbell-Kenton | Luther Bach | Bellevue | December 6-20 |
| Carlisle | G. W. Payne | Bardwell | December 4 |
| Carroll | J. M. Ryan | Carrollton | December — |
| Carter | W. S. Hawn | Grayson | December 11 |
| Casey | Wm. J. Sweeney | Liberty | December 27 |
| Christian | M. A. Gilmore | Hopkinsville | December 18 |
| Clark | R. H. Scobee | Winchester | December 21 |
| Clay | J. L. Anderson | Manchestor | December 11 |
| Clinton | S. F. Stephenson | Albany | December 15 |
| Crittendon | C. G. Moreland | Marion | December 10 |
| Cumberland | W. F. Owsley | Burkesville | December 5 |
| Daviess | I. A. Thorpe | Owensboro | December 11-25 |
| Elliott | | | |
| Estill | Walter Cox | Irvine | December 12 |
| Fayette | John Harvey | Lexington | December 11 |
| Fleming | J. B. O'Bannon | Flemingsburg | December 12 |
| Floyd | E. E. Martin | Allen | December 14 |
| Franklin | W. S. Snyder, Jr. | Frankfort | December 6 |
| Fulton | Glynn F. Bushart | Fulton | December 12 |
| Gallatin | J. M. Stallard | Sparta | December 20 |
| Garrard | B. Earl Caywood | Lancaster | December 20 |
| Grant | C. A. Eckler | Dry Ridge | December 19 |
| Graves | H. H. Hunt | Mayfield | December 4 |
| Grayson | C. F. Blankenship | Leitchfield | December 27 |
| Green | S. J. Simmons | Greensburg | December 3 |
| Greenup | Carl M. Gambill | Greenup | December 14 |
| Hancock | F. M. Griffin | Hawesville | December 3 |
| Hardin | D. E. McClure | Elizabethtown | December 13 |
| Harlan | Clark Bailey | Harlan | December 29 |
| Harrison | D. E. McClure | Elizabethtown | December 3 |
| Hart | S. F. Richardson | Munfordville | December 4 |
| Henderson | Walter O'Nan | Henderson | December 10-24 |
| Henry | Owen Carroll | New Castle | December 31 |
| Hickman | Chas. Hunt | Clinton | December 6 |
| Hopkins | David L. Salman | Madisonville | December 6 |
| Jackson | | | December 1 |
| Jefferson | Chas M. Edelen | Louisville | December 3-17 |
| Jessamine | J. A. VanArsdall | Nicholasville | December 20 |
| Johnson | P. B. Hall | Paintsville | December 8 |
| Knott | M. F. Kelley | Hindman | December 22 |
| Knox | F. R. Burton | Barbourville | December 28 |
| Larue | D. W. Gaddie | Hodgenville | December 4 |
| Laurel | Oscar D. Brock | London | December 12 |
| Lawrence | W. C. Gose | Louisa | December 17 |
| Lee | W. D. McCullom | Beattyville | December 8 |
| Leslie | John H. Kooser | Hyden | December — |
| Letcher | R. Dow Collins | Whitesburg | December 25 |
| Lewis | J. D. Liles | Vanceburg | December 17 |
| Lincoln | Lewis J. Jones | Houstonville | December 21 |
| Livingston | Wm. C. Davis | Salem | December — |
| Logan | Walter Byrne, Jr. | Russellville | December 5 |
| Lyon | H. H. Woodson | Eddyville | December 4 |
| McCracken | Leon Higdon | Paducah | December 12-19 |
| McCreary | R. M. Smith | Stearns | December 3 |
| McLean | G. L. Thompson | Calhoun | December 13 |
| Madison | Hugh Mahaffey | Richmond | December 20 |

| COUNTY | SECRETARY | RESIDENCE | DATE 1934 |
|---|---|---|---|
| Marion | W. C. Guffey | Lebanon | December 18 |
| Marshall | L. Henson | Benton | December 19 |
| Mason | Allen F. Murphy | Maysville | December 12 |
| Meade | A. A. Baxter | Brandenburg | December 27 |
| Menefee | E. T. Riley | Frenchburg | December — |
| Mercer | J. Tom Price | Harrodsburg | December 11 |
| Metcalfe | P. W. Bushong | Edmonton | December 4 |
| Monroe | Geo. E. Bushong | Tompkinsville | December — |
| Montgomery | D. H. Bush | Mt. Sterling | December 11 |
| Morgan | W. H. Wheeler | Betsy Sayne | December — |
| Muhlenberg | G. L. Simpson | Greenville | December 11 |
| Nelson | R. H. Greenwell | Bardstown | December 19 |
| Nicholas | T. P. Scott | Carlisle | December 17 |
| Ohio | Oscar Allen | McHenry | December 5 |
| Oldham | S. J. Smock | LaGrange | December 4 |
| Owen | K. S. McBee | Owenton | December 6 |
| Owsley | D. E. Wilder | Booneville | December 3 |
| Pendleton | W. A. McKenney | Falmouth | December 12 |
| Perry | R. L. Collins | Hazard | December 10 |
| Pike | M. D. Flanary | Pikeville | December 3 |
| Powell | J. W. Johnson | Stanton | December 3 |
| Pulaski | M. C. Spradlin | Somerset | December 13 |
| Robertson | | | December 17 |
| Rockcastle | Lee Chestnut | Mount Vernon | December 13 |
| Rowan | G. C. Nickell | Morehead | December 25 |
| Russell | J. B. Scholl | Jabes | December 10 |
| Scott | F. W. Wilt | Georgetown | December 6 |
| Shelby | W. E. Morris | Shelbyville | December 20 |
| Simpson | N. C. Witt | Franklin | December 11 |
| Spencer | | | December — |
| Taylor | W. B. Atkinson | Campbellsville | December 6 |
| Todd | B. E. Boone, Jr. | Elkton | December 5 |
| Trigg | H. L. Wallace | Cadiz | December 26 |
| Trimble | J. J. Gerkins | Bedford | December 26 |
| Union | D. C. Donan | Morganfield | December 12 |
| Warren | Hal Neal | Bowling Green | December 26 |
| Washington | J. H. Hopper | Willisburg | December 19 |
| Wayne | R. E. Teague | Monticello | December 6 |
| Webster | C. M. Smith | Dixon | December 28 |
| Whitley | C. A. Moss | Williamsburg | December — |
| Wolfe | G. M. Center | Campton | December 3 |
| Woodford | Chas. F. Voigt | Midway | December 6 |


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# KENTUCKY MEDICAL JOURNAL

BEING THE JOURNAL OF THE KENTUCKY STATE MEDICAL ASSOCIATION

**Published Under the Auspices of the Council**

VOL. 32 NO. 12 BOWLING GREEN, KY. DECEMBER, 1934

## TO OUR READERS

**This issue of the Journal is largely taken up with the proceedings of the Annual Meeting of the Kentucky State Medical Association at Harlan. Most of the members of the Association read these proceedings through regularly. This year we are instructed by the House of Delegates to request every member to read them. There has never been a more important session. The problems confronting the profession are presented clearly and the only way they can be solved in the interest of both the profession and the public is for every physician in Kentucky to acquaint himself with them and have every County Society act promptly and intelligently. This issue of the Journal should be preserved where each reader can have access to it at any time.**

**After qualifying oneself in regard to the important question of medical economics, members of the Association are urged to talk to luncheon clubs and their civic organizations about them so that our people may know about the various threats to professional efficiency. The people of Kentucky have expressed their confidence in the medical profession in no uncertain terms. We know we have their confidence now. All they need is to be informed as to our views. It is particularly important that letters on the subject be addressed by individuals and County Medical Societies, through our Congressmen and Senators, urging their study of the tremendously important questions involved.**

**The Council considers this the most important issue of the Journal that has ever been printed. It will be of value just in proportion as it is read and acted upon by our members.**

## INSURANCE DIRECTORIES

Reports from a number of physicians in the State show that a Kansas City organization seems to be holding out glaring inducements to physicians concerning the amount of professional work that will be diverted to those who are listed in some directory they are printing.

The Bureau of Medical Economics of the American Medical Association advises: "The listing of names of physicians in an insurance directory is, to a large extent, a matter to be determined by the individual physicians concerned, however, such a listing has no endorsement or approval from these headquarters. We have failed to receive any convincing evidence that the listing of a physician's name for which he pays from $10.00 to $75.00 is any guarantee that there is to be referred to the physician a sufficient amount of professional work for which he may at least recover his listing fee. Furthermore, we are not convinced that such a listing will guarantee to insurance companies that the physicians so listed represent the most competent ones to do this particular type of medical work."

Doctor Leland of the Bureau of Medical Economics, of the American Medical Association, says further: "It is my understanding from personal contact with some of the leading insurance companies that they can easily secure competent physicians for their work without any commercial rating such as that offered as an inducement by these directory organizations."

## DR. WILLIAM H. PARK

The Program Committee of the Jefferson County Medical Society announces with pleasure that Dr. William H. Park, Director of Laboratories, Department of Health of New York City, will speak before the Jefferson County Medical Society at their meeting which will be held December 3, at 8 P. M. His subject will be "The Use of B. C. G. in the Control of Tuberculosis". Dr. Park is an outstanding speaker and all doctors in Kentucky are invited to attend this meeting. Dr. Park has been brought to Louisville under the auspices of the Louisville Tuberculosis Association, and his recent announcement regarding the preparation of a vaccine for the prevention of Infantile Paralysis has been heralded as one of the most interesting and beneficial contributions to science that has been made in recent years. The whole world is familiar with his diphtheria work and it needs no comment. The Society is fortunate in securing such a brilliant speaker.

## PHYSICIANS AT HARLAN

Only once before, outside of Louisville, have as many Kentucky physicians assembled at an Annual Session of the Kentucky State Medical Association as found themselves at Harlan. The cordial and sincere urgency of the invitation of the profession from Harlan County was so pitched as to meet a responsive cord from almost every county in the State. At only two previous meetings have more counties been represented in the House of Delegates.

The scientific program was excellent and the large meeting place was constantly filled during every session. Nearly everyone in attendance expressed their appreciation of the fine work done by Dr. Pritchett in assembling the program and by the several scientific contributors to its excellency.

The Woman's Auxiliary also had its just attendance. Its proceedings will appear in its own supplement of the JOURNAL. Interest in them was stimulated by the presence of the Presidents of the Woman's Auxiliaries to the American Medical Association and to the Southern Medical Association.

The social entertainment which was given by the Harlan County Medical Society and the Woman's Auxiliary to the Harlan County Medical Society, and by the citizens of Harlan generally, was both so bountiful and so plentiful that it set a standard which will not be reached again. Everybody in Harlan seemed to take a special personal interest in every visitor and we all returned home with a feeling of affection for and confidence in the citizens of our mountains that we had never felt before. Such a meeting has done much to cement the unity that is so desirable between the different sections of our Commonwealth.

The commercial exhibit was up to its usual high standard of excellence and the scientific exhibits of the Committees on Physiotherapy and the Pharmacopoeia, of both of which Dr. Virgil Simpson was chairman, presented postgraduate courses on these two important subjects which were of the highest practical value. With the cooperation of the Kentucky Pharmaceutical Association the Committee on the Pharmacopoeia proposes to extend its exhibits to the County Societies in all sections of the State. Proper consideration of this exhibit and the report of this committee before the House of Delegates would result in greatly increased therapeutic accuracy and would save the people of the State thousands of dollars in the purchase of untried and unproven proprietary drugs.

The Harlan meeting will always be a pleasant memory of those who attended it.

## SCIENTIFIC EDITORIAL

### RADIATION THERAPY

For the past fifteen years or more it has been known by radiotherapists and a few physicians that radium and roentgen ray, when used properly and in sufficient quantity, is efficient in the treatment of cancer and benign lesions in certain locations. It is now recognized by most all physicians that radium and x-rays have been demonstrated to be of definite value in the treatment of many diseases.

Again it is recognized that radium may do harm as well as good when used by one who is unskilled, has had no training in its use. Further the uninformed public should be protected from serious and irreparable injury from improper and insufficient treatment.

At the June meetings of the American Radium Society, the American College of Radiology, the x-ray section of the American Medical Association and at the September meeting of the American Roentgen Ray Society, resolutions were unanimously passed that they consider it unethical and detrimental to the science of radiology, and to the good of suffering humanity for commercial laboratories to attempt to give advice or directions as to the use of radium in the case of a patient whom the person giving that advice has not had the opportunity to examine. In other words it is just as difficult to give such advice and directions as it would be for a surgeon to give advice as to the use of rental surgical instruments so that an untrained physician might attempt an operation. Various commercial companies advertise both in the medical journals and through the mails, medical advice for the purpose of making sales or renting radium or radon. This places these companies in the field of practicing medicine.

The same criticism is to be applied to institutions which rent or furnish their radium to those members of the Staff or outside the Staff who are unskilled in radium applications.

These Societies recommend wide publicity of the existence of the National Board of Radiological Examiners as is possible to the public, consistent with ethical practices, as the most effective safeguard which can be offered to the public.

They further recommend the refusal of advertisement matter in National and State Medical Journals when the companies advertise a medical consulting service or are advertising such service through the mails for the purpose of renting radium or selling

radon. Any doctor acting as such a consultant should be disbarred from the approval of the National Board of Radiological Examiners if the company so advertises.

The ethical commercial company is a necessity and is so recognized. It is the consulting service that is at fault. Properly qualified radium therapists will not be hampered in obtaining supplies of radium or radon for the purpose in which they are qualified to employ it.

Any consultant these companies may use for guidance should be one who is approved by the National Board of Radiological Examiners and he will refrain from advertising a medical service for the purpose of renting radium or radon.

It is known by all radiotherapists that a severe reaction is to be expected after the use of radium in some diseases to produce the best effects. If the treatments are given only by competent radium therapists the fear of burns and destructive lesions will soon be absent in the minds of patients and patients' friends.

In the malignant case it is necessary, justifiable and proper to give sufficient radiation to cause the skin to peel, to blister and to be irritated for some time to overcome the malignant diseases. All radiotherapists recognize it justifiable to produce a second degree radio-dermatitis when necessary.

If the above recommendations are adherred to by State and National journals, the science of radiology will be advanced, the public will become less fearful and more patients will come for treatment early. Much less suffering will be seen with more cures in malignancy recorded.

D. Y. Keith, M. D.

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**Experimental Nephritis Produced by Radium.**—Chronic and renal insufficiency without hypertension has been consistently produced in dogs by intravenous injection of the active deposit of radium emanation. The length of life varied inversely with the dosage of radium. The kidneys were the only organs showing pathologic or functional change. This apparent selective action is probably due to the excretion of the active deposit of radium by the kidneys, resulting in a greater concentration of radioactivity in these organs. The kidneys were uniformly small and contracted, showing glomerular, tubular, interstitial and vascular changes comparable in some respects to what occurs in man in chronic hypertensive nephritis. No hypertension was produced, however. The earliest detectable change occurred thirty days after the initial dose.

## OFFICIAL ANNOUNCEMENTS

### Minutes of the Eighty-Fourth Annual Scientific Sessions of the Kentucky State Medical Association Held at Harlan

October 2, 3, 4, 1934

### FIRST SCIENTIFIC SESSION

Tuesday Morning, October 2

The opening session of the Eighty-Fourth Annual Meeting of the Kentucky State Medical Association, held in the Methodist Church, Harlan, October 2-4, 1934, was called to order at ten-fifteen o'clock, W. M. Martin, Harlan, President of the Association, presiding.

President Martin: The meeting is now called to order. We will have the invocation by the Pastor of the Methodist Church, Reverend Vogel.

Invocation

Reverend Dr. Vogel: Our heavenly Father, we come to Thee this morning with truly grateful hearts for this occasion. We realize, our Father, that unless we are working together with Thee, discovering Thy truth and applying it in a very practical way to life, we must fail, but the more we do discover Thee and Thy truth and work together with Thee in this world of ours, the greater and more abundant shall be our life. So we thank Thee this morning for those who are here seeking the truth and making this wonderful application of truth to human life. Let Thy divine blessings rest upon every one of them, these doctors who constitute this Kentucky State Medical Association and the splendid ladies who are working with them and the visitors and friends who have come here to enjoy together this great session. Mayest Thou be one in our midst and use all for Thine honor and glory and for the advancement of a greater life for mankind.

Make us mindful of Him who is the Way, the Truth and the Light, and reward these who through sacrifice are finding truth and are building life more abundantly. We thank Thee for the honor that has come to our city by their presence, and we pray that they shall carry something back with them that shall be an inspiration to them in the future. Use us all together for building a greater life in our old Kentucky home and in this beloved land of ours and wherever our influence may reach. We ask it in Jesus' name. Amen.

President Martin: I notice that on this program we have two addresses of welcome. That is characteristic of the people of Har-

lan and the people of Harlan County and the people of the mountains in general. If they had the time they would give you a dozen or even a hundred addresses of welcome. The first is by our Mayor, Dr. L. O. Smith. (Applause)

ADDRESS OF WELCOME

DR. L. O. SMITH: Mr. President and Gentlemen, Fellows in the medical profession, and Guests: It is a genuine pleasure to have the privilege and honor of welcoming you to Harlan. Our people here are receiving you and the news of your coming as our big day and are particularly happy to have this learned, scientific and distinguished group. People who come in contact with the great, the wise and the good must become stronger, wiser and better people by that contact and association. We thoroughly appreciate the fact that Harlan and her people will be richer, stronger and wiser and that we shall have new inspiration because of our contact with you and your presence here during this convention, that our doctors will be better and wiser, that our people will have a greater understanding, respect for and give greater cooperation to the medical profession.

We think our city safe from every standpoint. Our sanitary regulations should adequately protect you from disease. Among other things, all cooks and food handlers must be free from social or infectious disease. This should be shown by certificate on file from a reputable physician at the place of business. All eating and cooking utensils are sterilized by boiling after having been washed.

We are proud of our city, homes, our municipal water works. We know the water supply is safe, but should there be any doubt in your mind we have other things to drink so potent that no disease-producing bacteria could exist.

Conforming to an Old World custom and ceremony handed down through the centuries and in vogue these modern days, I now present you this key to our city, that you and your organization shall have access to and full freedom of this city, except the doors of the jail.

We want you to do as you will, to take what you want, and if you need any help call on the Mayor, the police department, the fire department, or the Harlan doctors.

Now I shall present one of Harlan's rising young business men, our first Mayor, who is still in service after his term of office expired. He is one of Harlan's own, born and reared among us. We older fellows have seen him grow into maturity. He has been a tremendous factor in the education, civic and business development of Harlan County and this section of Kentucky. He is in the banking business now, one hand on the money bags—you all should know him. He will speak words of welcome on benalf of the civic and business interests of Harlan County. (Applause)

MR. ABNER C. JONES: Mr. Mayor, Mr. President, Friends: I am not so sure just what the purpose was in giving you a double dose of welcome, but I am rather inclined to think they want to give it to you in broken doses.

It is a delight for me to be here and look into your faces. Now will you please forget that word "address." It sort of frightens me. Let's not think of it as a speech, but let me get right down close to you and let's just have a heart-to-heart talk. That is what I want to do this morning.

I don't know why the key. One of us didn't know what the other was going to say, and I was prepared to say to you that the old proverbial key has been thrown away, has been discarded, Harlan has no key, everything we have and everything that you want that we can get is yours.

My job here I realize is a big one. I appreciate what the Mayor said about me. Dr. Hunt over here just whispered ot me, "Are you going to brag on us?"

I said, "I can't do anything else but brag on you." I think Dr. Smith just got a little off the track, we're not going to brag on each other, I haven't a word to say about him. He said I was Harlan's first Mayor. I have to explain that to you by saying Harlan is one of these new town that has just grown up in the last few years.

I read this little anecdote the other day that impressed me. It said an epileptic swooned and fell on the street. He was whisked away to the hospital. The nurses in pulling off his coat found pinned to the lining a littlel note which read like this: "This is just a plain case of fit, not appendicitis, my appendix has already been removed twice."

I am told that among your good doctors — maybe Dr. Martin here—there was one who had a pneumonia patient. The good lady of the home whose husband was the patient had been blessed with an operation and the doctor had heard about it many a time and he was already pretty well bored. Finally the lady said to him, "Doctor, do you really think he has pneumonia? You know, I have heard about patients being

treated for pneumonia and then dying of typhoid."

The doctor said, "Madam, I give you to understand that if I treat a patient of pneumonia he dies of pneumonia." (Laughter)

My job here this morning, my racket shall I call it, is pretty much the same as that of the little tow-headed rascal who popped into a doctor's office one morning and said, "Doctor, I guess I've got the measles, but I know how to keep it."

The doctor looked puzzled, and the kid said, "Aw, get wise, Doc. What'll you give me to go to school and spread it among the kids?"

My job here this morning, ladies and gentlemen, is to scatter Harlan's welcome among you folks. I am afraid to try to use medical terms; I got in a terrible jam some years ago when I took a notion I might learn golf. I went down to the country club and learned just a few things about it, but I didn't learn any golf terms. One of your golfers in Louisville came to my office and said, "Let's go out for a game of golf." I knew I was getting into trouble when I went with him, but I had to go. When we got to the second green he approached his ball and put it right between mine and the cup. He said, "Ah, I've got you stymied."

I said, "You've got me what?"

He said, "Stymied."

I said, "I reckon so," and I simply kicked his ball out of my way and put my ball in the cup.

Now I am just a bit stymied because I don't speak the doctors' language like my good friend the Mayor does. But let me say that I am here to scatter Harlan's welcome, and we want that it shall take. We have got two or three different methods to get you all if we have to use them. We are going to try the friendly handclasp, and we call that contagion; and then we have got to get you to swallow it, that is what they call infectious, isn't it? And I suspect we may have to mix it a little bit with some of Harlan County's good old bottled in bond sunshine, and if we find anybody who is rather immune and sort of stubborn about taking things, we will undertake to give you a shot in the heart.

We don't want you to get well or to recover. We want that this welcome of Harlan shall abide in your heart. We are already making plans for your return one of these days. In the south end of Harlan County we have a vast game and fish preserve. We are stocking those streams with bass and we are stocking those forests with deer and ring-necked pheasant. We have recently developed another plan for another vast game preserve in the north end of the county, and we are working hard on that great highway, Federal Route No. 33, the shortest route from Chicago to Charleston, coming right through the heart of Harlan. Next time you come we will have a bigger and a finer road.

We want this welcome to so establish itself and so master you that you can't keep from coming back.

May I pause just a bit here and digress to say to you that the only way we know to judge the Kentucky Medical Association is through what we see and know of our own local doctors and their work here, and I say to you if Kentucky has the leadership (and I believe you do) we have in our own county doctors who can do what they will, and I congratulate you and welcome you for what you have done. You have put Kentucky out in the front rank; it is the pride of the Union.

I spent many years in the school profession and I was ashamed that we had to take our position way down at the bottom. I say to you that Kentucky cannot repay the McCormack family, who are outstanding in your profession and who have done so much for your state.

Doctors as a rule are timid, unassuming sort of folk. I think it was Ham Bone who said, "You kin drap foah one-dollar bills on de floah, nary a sound. You kin drop foah pennies an' it makes a racket. Dem at makes de mos' naise ain't allus de mos' account." (Laughter)

There are some of us that take the role of making noise; there are others quiet and unassuming who do the work. Have you head of Pat and his locomotive? Somebody said to Pat: "Why is it every time your train whistles it stops?"

Pat said, "It's just like this. I've just got so much steam. When I whistle I can't run, when I run I can't whistle."

These whistlers are not all in vain, you need some of them, your medical profession needs them, you are too much inclined to pull. I say we need whistlers and I say to Dr. Howard if you can get them all to whistling together in unison the State of Kentucky will hear them, and if you get them all together to pulling in unison the State of Kentucky will feel them, and if you ever reach that point where you can combine the pulling and the whistling, I could take Dr. Martin and with all the gas he has got, if I could harness it all, and he

could pull the load and whistle at the same time. (Laughter and applause) I say if we reach the point where we can all whistle and pull together, this old ship of state is destined for a safe harbor.

I mustn't take more time, but I want somehow to get Harlan's welcome to your hearts and souls, as we feel it. I don't know any other reason that they put me on this program except that they feel I am a little more sincere or maybe because I am not a doctor. The Mayor is a doctor; they felt somebody else had to put this thing across to you so you would believe it. (Laughter)

You have done your work in Kentucky faithfully and well. Your great health program I became more or less acquainted with as a school man, and I can appreciate that as many folks cannot. I covet for you that same publicity that is given to organizations that are not half so worthwhile. Your work is basic, it is fundamental. Kentucky cannot go forward until her people are well and happy. You have made your contribution to the happiness of Kentucky. We thrill as we recall the great sacrifices of the outstanding men and women of your profession, sacrifices of which we today are the beneficiaries.

May I say to you this morning that the sun is shining a bit brighter and the birds are singing a bit sweeter in and around that old Kentucky home because of your work in making our people healthier and incidentally making them happier.

Maybe you have heard it before but I am going to give it to you again with apologies to my good friend Vogel. I want to borrow from Colonel Henry Watterson. "Our city, our homes are yours. We have got the jug, the sugar, the ice, and the mint. We even surrender our hip pocket playthings with which we are wont to amuse ourselves. If you can't make yourselves at home and pass the time pleasantly, may the Lord have mercy on your soul." (Laughter and applause)

PRESIDENT MARTIN: Ladies and gentlemen, I am just about to reach one of the happiest moments of my life. When I was just a mere lad I started to medical school, in four years I graduated, I graduated quite young because in those days you didn't have to know a great deal to graduate anyway, but I began at once attending the Kentucky State Medical Association meetings. There was a man there that I met at the first meeting who was then a father to me. I was young and possibly might have gone astray, but he would take me by the hand and lead me to my room, and he took care of me just as my own father. You know, I never dreamed in those days that I ever would have the pleasure of having that old friend come to my town. He comes from the farthest distance in the state from this place. It is true he is old, but he is the best looking man belonging to the State Medical Society. That is my friend Dr. Hunt from Mayfield, who will respond to this address of welcome. (Applause)

RESPONSE TO ADDRESS OF WELCOME

DR. H. H. HUNT: To start off with, I'm scared, but that's all right.

Mr. Chairman, Ladies and Fellow-Doctors: When Teddy Roosevelt was President of the United States he was visited on one occasion by Sitting Bull and an Indian interpreter. The interpreter in introducing the Chief said, "Mr. President, Big Indian, Sitting Bull."

This morning as we visiting doctors sit here and listen so intently to that profound, marvelous, affectionate address of welcome to this beautiful little city, we are just wondering if the speaker is really in earnest or if it is just bull.

We visiting doctors have not come as crusaders like your eastern friends did several years ago to tell you how to live, what to do, thou shalt love thy brother as thyself and thou shalt not kill. So much has been said and so little understood of the peoples of the mountains that there are today in the different states of the United States people who really believe that when you speak of the folks of the mountains you are talking of folks that are practically all blind, those that are not blind are running stills, and the rest of them shoot at each other for daily amusement.

For the last forty or fifty years when I went to cast my vote way down there in West Kentucky they always said, "Why, Doctor, there's no use to vote. The Republicans will steal it."

There is so much that has been said about the people of the mountains, yet in my little short visit I don't believe I have ever met more happy contented citizens or such cordiality and hospitality from the doctors and the public in general. So today, ladies and gentlemen and doctors, the West has come to shake hands with the East in a friendship that should be everlasting. We have left the most western portion of Kentucky, the banks of the Mississippi, to come here. If I had been just a foot further I would have been drowned in the Mississippi. Five hundred and sixteen miles we have come. We have left our fertile fields and valleys and traveled eastward. As we came

to that part of Kentucky known as Central Kentucky, noted for its fast women and beautiful horses, we didn't tarry long because it looked a great deal like No Man's Land. But as we began to travel a little eastward and came to Pineville and began to see the wonders of the mountains, the the beautiful scenery, the mountains hanging as they were between the heavens and the earth, dotted here and there with trees, native shrubs, native flowers, I just thought what a wonderful place it was, and I thought of my friend Dr. Martin who has often boasted that he is from the wild and woolly East Kentucky, Harlan County. I don't blame you, Doctor, but I want to say this to you: Every night when you kneel down to say your prayers (and I don't think you do) to thank God for the way you have lived through the day, you ought to thank him for letting you be born and reared in a community like this, because I think it is the making of you. (Laughter)

So today, gentlemen, Mr. President, I wish to thank the committee who so kindly and thoughtlessly placed me on the program to deliver this response of welcome. We appreciate all the effort and work and anxiety connected with putting on a program like this in your own town. We have gone through it. But when a man gets in one of those little cars and turns those U's and V's and hairpin curves and comes about 500 miles, you ought to appreciate him, too. (Laughter) After we got to Harlan and traveled a half hour or an hour looking for this place and got right back where we started, I was driving as carefully as I could, but Mrs. Hunt looked up and saw another one of those curves under a cliff and she said, "Prepare to meet thy God."

So, to make a long story short, I know that the visiting doctors all feel that they are welcome, I know they are all glad to be here, and we long for the opportunity to come and be with you folks again in the near future. If they take that federal relief away from us in Western Kentucky I'm liable to be up here at any time. (Laughter)

There never was a time in the history of the world when doctors should stand more unitedly together, assist one another, sympathize with one another, and help one another in every undertaking. Everything in the State of Kentucky is organized except the doctors, industry, labor, teachers and preachers, bakers and butchers and candlestick makers, and it is up to the doctor today, because everybody else has organized for selfish purposes. If we don't they are going to take all our privileges away from us, tell us when to get up, when to go to bed, and what to charge our patients. If it was not for our efficient Secretary working for the doctor, I doubt whether we would have a medical profession today. You know that old adage, united you stand, divided you are not worth a tinker's damn; that applies more to doctors than anything else in the world. If there is a doctor here this morning who has not in his county a live, active society, for God's sake go home and organize one, because the profession needs you and later on you will need the profession. I just want to drop that thought here, that we should organize. The medical profession of Kentucky ought to be 100 per cent, but as it is we are dwindling a little behind 50.

I bring my long talk to a close, and I just want to say that we feel we are welcome, we are glad that we are here, and we feel just as welcome, Dr. Martin, as this:

The burglar through the window did creep,
Into the room where two old maids did sleep.
One old maid began to holler and shout,
And the other said, "Shut your mouth, you fool, you'll scare him out.
Lie still, don't make a noise, please don't run him away,
For he's just as welcome as the flowers in May." (Applause)

SECRETARY MCCORMACK: All former Presidents are requested to come forward and take seats on the rostrum for the installation of the new President.

PRESIDENT MARTIN: I suppose, having had the great pleasure of introducing my friend Dr. Hunt, that now it becomes my duty and it is a real pleasure to install the new President. The doctors all over the state have known this man for years, especially those who have always attended the Kentucky State Medical conventions. Dr. Howard has always been present. Dr. Howard has always taken an active interest in his county medical society and also his state medical association. Dr. Howard and I served on the Council, he from his district, I from mine, for quite a number of years. I have worked with Dr. Howard not only at the sessions of the Council at meetings of the Kentucky State Medical Association, but we have met on various occasions in mid-season that we might, with all the other members of the Council, work out the best interests of this Society.

I never could see why I was elected President of the state medical society, but it is very easy for me, Dr. Howard, to see why you were elected to this honorary position.

It is a great pleasure to me to take from my lapel and place upon yours this badge showing to the people of Harlan during your stay in this community that you are our President. I want to congratulate you and I want to wish you well in your year's work. I know you have the ability, I know you have the energy, and I know you have that which it takes to make a successful President of this state. (Applause)

Dr. C. C. Howard, Glasgow, took the Chair.

President Howard: Mr. Chairman, ladies and gentlemen, I love the profession of Kentucky next to the memory of my mother. I appreciate deeply this honor, and I will do my best to uphold this society, because I am proud of the Kentucky State Medical Association. I feel the best thing I can do now is to begin this program and help carry it out.

Next is a Memorial, by Dr. George Bushong, of Tompkinsville.

Dr. G. W. Bushong: Mr. President, ladies and gentlemen, following is a list of the members of the Kentucky State Medical Association who have passed away during the last twelve months, since September 14 when we met at Murray. After reading this list I wish you would just stand in memory of these men for one minute.

William Johnson, London, Laurel County, April 23, 1934.

W. F. Boggess, Louisville, July 1, 1934.

J. G. Owsley, Lily, Laurel County, 1934.

J. B. Messer, Bluestone, Rowan County, July 24, 1934.

E. A. Stevens, Mayfield, Graves County, May 4, 1934.

W. M. Ison, Edmonton, Metcalfe County, May 13, 1934.

O. P. Nuckols, Pineville, Bell County, April, 1934.

J. S. Gilbert, Allais, Perry County, Feb. 9, 1934.

J. J. Gambill, Blaine, Lawrence County, Jan. 10, 1934.

J. M. Gilbert, English, Carroll County, Feb. 12, 1934.

E. D. Covington, Murray, Calloway County, Jan. 14, 1934.

J. W. Kincaid, Catlettsburg, Boyd County, Dec. 20, 1933.

A. F. Goodwin, Lonellen, Harlan County, Dec. 25, 1933.

B. B. Keys, Murray, Calloway County, Jan. 25, 1934.

Robert Wallace, Louisville, Dec. 1, 1933.

E. M. McKee, Versailles, Woodford County, Nov. 17, 1933.

L. C. Redmon, Lexington, Fayette County, Oct. 27, 1933.

E. Bentley Cox, Louisville, Oct. 27, 1933.

Mildred J. McKee, Perry County, Oct. 29, 1933.

W. A. Guthrie, Franklin, Simpson County, Nov. 9, 1933.

Thomas K. VanZandt, Louisville, Sept. 16, 1934.

Curran Pope, Louisville, Sept. 21, 1934.

J. G. Furnish, Covington, Sept. 8, 1933.

James M. Hubbard, Hickman, Nov. 29, 1933.

Chester A. Wright, Fulton, Aug. 13, 1934.

C. W. White, Covington, Mar. 13, 1934.

B. F. Zimmerman, Louisville, Nov. 10, 1933.

The members arose and stood in silent tribute to the memory of the deceased members.

President Howard: We will now have a report of the Committee on Arrangements, Dr. W. C. Bailey, Chairman.

Dr. Bailey presented the entertainment program.

Secretary McCormack: Miss Sullivan has just sent me word that we have the largest registration for the opening session that the Association has ever had outside of Louisville. (Applause)

President Howard: We will now proceed with the scientific program.

The following papers were presented.

Lead Poisoning in Children, by William W. Nicholson, Louisville; discussed by J. E. Stanfill, Jenkins; F. R. Burton, Barbourville; closing discussion by William W Nicholson.

Acute Appendicitis in Children, by William Edgar Fallis, Louisville; discussed by J. W. Bruce, Louisville; George A. Hendon, Louisville; Philip F. Barbour, Louisville; Wallace Frank, Louisville closing discussion by William Edgar Fallis, Louisville.

Treatment of Diarrhea in Infancy, by James W. Bruce, Louisville; discussed by J. H. Pritchett, Louisville; T. Cook Smith, Louisville; closing discussion by James W. Bruce, Louisville.

Congenital Hypertrophic Pyloric Stenosis, by E. S. Allen, Louisville; discussed by Philip F. Barbour, Louisville, Frank Strickler, Louisville; Irvin Abell, Louisville; discussion closed by E. S. Allen, Louisville.

The Oration in Medicine was given by W. J. Shelton, Mayfield, on Some Mutual Interests of Physicians and Patients.

The meeting recessed at 12:40 o'clock

## SECOND SCIENTIFIC SESSION

Tuesday Afternoon, October 2

The Second Scientific Session was called to order at 2:00 p. m. by President Howard.

The following papers were presented:

Feeding the Diabetic, by L. Lyne Smith; discussed by Uly H. Smith, Louisville; J. G. South, Louisville; George A. Hendon, Louisville; discussion closed by L. Lyne Smith, Louisville.

Amebiasis, by Frank M. Stites, Louisville; discussed by Morris Flexner, Louisville; discussion closed by Frank M. Stites, Louisville.

Treatment of the Tuberculous in the Home, by J. E. Edwards, Lancaster; discussed by W. T. Little, Calvert City; Marion J. Alexander, Louisville; Arthur T. McCormack, Louisville; L. H. Winans, Ashland; Paul Turner, Hazelwood, Louisville; George B. Sprague, Lexington; closing discussion by J. E. Edwards, Lancaster.

Some Newer Aspects of Arthritis, by A. C. McCarty, Louisville; discussed by David Jones, Louisville; Asa W. Nickell, Louisville; W. Barnett Owen, Louisville; Orville Miller, Louisville; discussion closed by A. C. McCarty, Louisvile.

The following motion was made by A. T. McCormack, seconded and carried: that the incoming President appoint a Committee on Arthritis, to consist of the essayist and those who took part in the discussion, who will continue to make reports on the progress in this tremendously important field.

The final paper on the program was Endocrine, Vitamine and Allergen Relativity, by R. A. Bate, Louisville; discussed by E. R. Palmer, Louisville; A. M. Leigh, Louisville; closing discussion by R. A. Bate, Louisville.

## PUBLIC MEETING

### Tuesday Evening, October 2

At the public meeting, which was held at 7:40 p. m., in the Baptist Church, E. R. Palmer, Louisville, introduced the President, C. C. Howard, Glasgow, who delivered an address on Kentucky.

A collection was taken for the Jane Todd Crawford Memorial.

Senator Hiram Brock was presented to the meeting by Arthur T. McCormack.

A paper on Cancer of the Uterus was given by Louis Frank, Louisville.

The meeting adjourned at nine-twenty.

## THIRD SCIENTIFIC SESSION

### Wednesday Morning, October 3

The Third Scientific Session convened at 9:30 a. m. by President Howard.

The following papers were presented:

The Wearing of Glasses as It Relates to Medicine, by Adolph O. Pfingst, Louisville; discussed by R. W. Bledsoe, Covington; R. B. Maw, Pineville; A. L. Bass, Louisville; Arthur T. McCormack, Louisville; closing discussion by Adolph O. Pfingst, Louisville.

Treatment of Tetanus, by Ernest B. Bradley, Lexington; discussed by Frank M. Stites, Louisville; N. M. Garrett, Broadhead; A. T. McCormack, Louisville; closing discussion by E. B. Bradley, Lexington.

Drug Addicts, by Thomas J. Crice, Louisville; discussed by W. E. Gardner, Louisville; A. T. McCormack, Louisville; G. G. Thornton, Lebanon; discussion closed by Thomas J. Crice, Louisville.

Some Further Studies and Observations of Hyperthemia (prepared by Curran Pope, Louisville, before his death), read by J. C. Rogers, Louisville. No discussion.

The Trend of Modern Medicine, by C. G. McLean, Lexington; discussed by Virgil Simpson, Louisville; C. A. Vance, Lexington; Earl C. Yates, Lexington; R. G. Leland, Chicago; discussion closed by C. G. McLean, Lexington.

The Business Side of Medicine, by W. B. Atkinson, Campbellsville; discussed by G. G. Thornton, Lebanon; E. M. Howard, Harlan; closing discussion by W. B. Atkinson, Campbellsville.

The Oration in Surgery. The Fracture Problem, Present and Future Status, was delivered by I. A. Arnold, Louisville.

The meeting recessed at twelve-thirty o'clock.

## FOURTH SCIENTIFIC SESSION

### Wednesday Afternoon, October 3

The Fourth Scientific Session was called to order at two o'clock by President Howard.

The following papers were presented:

Concerning the Symptomatology and Diagnosis of Extra-Medullary Tumors of the Spinal Cord, by Franklin Jelsma, Louisville; discussed by J. J. Moren, Louisville; W. Barnett Owen, Louisville; closing discussion by Franklin Jelsma, Louisville.

Malignant Tumors of the Thorax and Upper Abdomen, by D. Y. Keith, Louisville; discussed by Paul Turner, Hazelwood, Louisville; Henry Kennon Dunham, Cincinnati; D. Y. Keith, Louisville.

Ruptured Ectopic Pregnancy, by W. O. Johnson, Louisville; discussed by John H. Blackburn, Bowling Green; A. T. McCormack, Louisville; closing discussion by W. O. Johnson, Louisville.

Francis M. Massie, Lexington, gave a moving picture demonstration, Some End Results of Plastic Surgery.

The final address was given by N. M. Owenby, Atlanta Georgia, Quo Vadis.

The meeting recessed at four twenty-five p. m.

## BANQUET

### Wednesday Evening, October 3

On Wednesday evening at 6 p. m. the Harlan County Medical Society was host to the visiting physicians at a banquet held in

the High School auditorium, 375 were in attendance.

Dr. G. A. Hendon, Louisville, was toastmaster; Drs. W. D. Haggard, Nashville, Tenn., A. T. McCormack, W. A. Nickells, W. M. Martin, L. O. Smith, N. M. Owenby, Atlanta, Ga., Mrs. Southgate Leigh, Norfolk, Va., and Mrs. B. K. Menefee, Covington, Ky., were the speakers.

THE TOASTMASTER'S ADDRESS, G. A. HENDON, Louisville.

Mr. President and Members of The State Association and Members of The Auxiliary:

It is indeed an inspiring spectacle that we are now permitted to witness. The Blue Grass, The Bear Grass, the "Penny rile," The Purchase, The Rhododendron and the Laurel all blended about this board in harmonious and sweet accord. The Kentucky Medical Association has emulated the example of Mahommet, since the mountains would not come to Mahommet, Mahommet went to the mountains.

I wish to express a sentiment that I know is blooming in the heart of every visitor within your gates tonight. We have been startled into moments of inarticulate awe and admiration by the grandeur and the glory of your majestic mountains. Our brightest fancies have been arrested and held suspended in mid career as we have contemplated your sparkling streams cascading their musical course to the sea. We felt the comforting hand of reassurance and our faith in our country's prosperity has been refreshed as we have looked upon the vastness and the volume of your industrial enterprises.

But despite the enchantment of such powerful appeals it is the sincerity of your generous and unbounded hospitality that has made us your willing captives bound by the golden chains of gratitude and affection.

Not one of us can leave Harlan without the longing that is inspired by the land of the rhododendron and the Laurel and her people. And the beautiful city of Harlan will always be enshrined in our hearts as the Gem of the Cumberlands.

Following the banquet the Annual Oration was delivered by Kennon Dunham, Cincinnati, on Pulmonary Emphysema, a Sequel of Pulmonary Tuberculosis, and an address on Goiter was given by William D. Haggard, Nashville.

After the evening program the society adjourned to attend the grand ball at the Country Club.

## FIFTH SCIENTIFIC SESSION

THURSDAY MORNING, OCTOBER 4

The meeting was called to order at eight o'clock by E. R. Palmer, Louisville.

The following papers were presented:

Internal Hemorrhoids, Treatment by Non-Surgical Methods, by Rufus C. Alley, Lexington; discussed by Granville Hanes, Louisville; Carl H. Fortune, Lexington; William J. Martin, Jr., Louisville; C. V. Stark, Maysville; A. T. McCormack, Louisville; discussion closed by Rufus C. Alley, Lexington.

The Etiology and Surgical Treatment of Anal Fistula, by Wm. J. Martin, Jr., Louisville; discussed by Rufus C. Alley, Lexington; A. T. McCormack, Louisville; Granville Hanes, Louisville; closing discussion by Wm. J. Martin, Jr., Louisville.

Laboratory Tests for Pregnancy, by Harry M. Weeter, Louisville.

A motion of appreciation to the local physicians, ladies, committee on arrangements, the press, and others who had participated in making a success of the meeting, was offered by Arthur T. McCormack, seconded and unanimously carried.

The meeting adjourned sine die at eleven-thirty, a. m.

A. T. McCORMACK, Secretary.

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## MINUTES OF THE EIGHTY-FOURTH ANNUAL SESSION OF THE HOUSE OF DELEGATES OF THE KENTUCKY STATE MEDICAL ASSOCIATION HELD AT HARLAN, OCTOBER 1-4, 1934.

MONDAY, 2 P. M., OCTOBER 1, 1934

The first session of the House of Delegates of the Kentucky State Medical Association, Eighty-Fourth Annual Meeting, held October 1-4, 1934, at Harlan, convened at 2:15 p. m., Monday, October 1, in the Methodist Episcopal Church, President W. M. Martin, Harlan, presiding.

PRESIDENT MARTIN: The House will please come to order. The Secretary will call the roll.

Roll Call.

SECRETARY ARTHUR T. McCORMACK: Thirty-seven members are present, Mr. President, a quorum.

PRESIDENT MARTIN: Next is the reading of the minutes of the last meeting.

V. A. STILLEY, Benton: I move the reading of the minutes be dispensed with.

The motion was seconded and carried.

PRESIDENT MARTIN: Next is the report of the Committee on Scientific Work, C. C. Howard, Glasgow, Chairman.

C. C. HOWARD, Glasgow: Mr. Chairman and Gentlemen: As you have seen from the program, we have worked out a scientific program, and most of the credit for this scientific program is due to Dr. J. H. Pritchett, of Louisville. He has conferred with Dr. McCormack, but really Dr. Pritchett has done most of the work, I am sure, in presenting

this program and in discussing it, will make it worthwhile.

I feel we are in the right town to have a good meeting. The fellowship here is right, and certainly the scenery and the climate are right. I am sure we will have a very fine meeting.

SECRETARY MCCORMACK: In order to adopt the program formally, I move that the scientific program as printed and distributed be adopted as the official program of the session.

I want to call to the attention of the members, so they will understand what we are voting on, that when this is adopted it means that under the By-Laws it cannot be changed except in the House of Delegates, that no member can take a longer time for delivering his paper or essay than he has agreed to take, that no man can take up more time in discussion than the five minutes extended under the By-laws, and that unanimous consent cannot be asked or extended in the meeting of the Association itself. In adopting this program it ought to be understood that it is adopted definitely for the purpose of working under it during the session.

The motion made by the Secretary was seconded and carried.

PRESIDENT MARTIN: Report of the Committee on Arrangements, Dr. Clark Bailey.

REPORT OF COMMITTEE ON ARRANGEMENTS

W. C. BAILEY, Harlan: Mr. President, our Committee on Arrangements have had some hazards and some handicaps. We feel that the committee has worked hard and has something to offer you doctors who are visiting with us. The greatest trouble that we have is our housing problem. Our hotels are full. This is one thing we want you to understand, that those of you who go into private homes probably will get better attention than most of the doctors who stay at the hotels.

We had our public meeting last night, there were around a thousand people there, and it had a good effect on the people here in Harlan. The business men, the professional men, all the people in Harlan are behind us. They have been looking forward to this meeting. They intend to make you feel at home and they will do everything possible to make your stay a happy one. We have tried to make arrangements that will be pleasing to you and we hope that you who have come here will enjoy the meeting and will leave with a good taste in your mouths and will know that we have tried our best to make you satisfied.

PRESIDENT MARTIN: Every doctor in Harlan County and every doctor's wife and every lawyer and every coal operator and every business man is behind this association one hundred per cent. During the last week or ten days it has been sort of like a boy waiting to go to the Christmas tree, waiting for Santa Claus to come. It seems our people could hardly wait. We do want you to feel at home. If we can make you feel at home we are going to do it; if we don't do it we just don't know how. We believe we do know how and we are going to do what we think will make you gentlemen feel good. After you leave here, some of these days at this convention when some Harlan fellow gets up and says, "Let's go back to Harlan," I believe you will vote for it.

You are going to be just as welcome in any home in this town as if you were walking into your own home. It was known that if we had a good number of doctors attending this convention we wouldn't have hotel accommodations; we knew and acknowledged it, but we did know that you would be taken care of just as nicely in the homes, and without cost. If I were in Louisville and you didn't have hotel accommodations and Dr. Abell invited me to his home, I would be glad to go because it wouldn't cost me anything and I would be taken care of better than in a hotel.

President Martin made announcements about the golf tournament and the prizes.

PRESIDENT MARTIN: I haven't any extensive report to make. Around the first of the year my arrangements were somewhat changed and I couldn't do the work that I would have done and would have liked to do. Generally over the state I learned from the doctors and the Councilors and the Secretary that conditions in our county medical societies have improved over what they have been for the last two or three years.

In our own county our doctors are better off financially, they are in a better condition, our business has picked up, and things are better generally. The fellow who isn't making any money knows a lot of things he would like to do if it weren't for financial embarrassment. I am glad that seemingly we are walking out of this depression and that our doctors are getting more pay for their work, or at least are able to collect something now, whereas for a while they could not get anything.

I am sure when we install Dr. Howard as President tomorrow he will be able to do a good deal more than I have done. I was handicapped. I was very sorry for it on account of my position in the Kentucky State Medical Association, but I was very glad for it on account of my own financial condition. That is the reason I couldn't possibly give

the time to it that I would otherwise have given.

In retiring from the presidency of this organization I want to thank you gentlemen for bestowing an honor upon me that you shouldn't have done, that should have gone to somebody else who was more worthy, but I assure you that no one else could have been elected who would have appreciated it any more than I have. (Applause)

REPORT OF THE COUNCIL

C. A. VANCE, Lexington: Mr. President, Members of the House of Delegates: This is the report of the Council which was discussed and approved two weeks ago at its meeting in Louisville.

We are very happy to report that the paid membership of the Association is 1584 as against 1536 last year and 1686 in the previous year. We are particularly happy to note this indication of recovery, as our paid membership is increasing for the first time in five years. These figures indicate the loyalty of the physicians of Kentucky who are in active practice. No other professional group was more seriously affected by the nation-wide economic situation, from which we are just emerging, than the medical profession. Between two-fifths and one-half of the people of the state are either receiving their support from Federal relief or are in the marginal class that has no surplus beyond the bare necessities of life. Until these two groups are more fully restored to economic sufficiency, until the stores and factories that ordinarily supply their demands are opened again, and until other widespread conditions which have caused the lessened demand for medical service and have too frequently postponed consultation with the physician until serious difficulty has developed, are corrected or at least largely alleviated, the paid membership of the Association may be reasonably expected to continue below the possible maximum.

There are few less than 2,500 physicians holding certificates entitling them to practice medicine in Kentucky, and just a few more than 2,000 of these are in active practice. Most of those who are delinquent in their dues have been constant attendants at the meetings of their medical societies and many of them will pay up their delinquent dues as they are better able to collect their accounts.

In the September issue of the JOURNAL we have published a report of the Auditor on the accounts of the Secretary and Treasurer. We have continued to publish these reports in great detail because we feel that every member of the Association, and particularly every member of the House of Delegates, is entitled to know these details. The income of the JOURNAL this year was $5,859.75 as contrasted with $5,320.59 last year. The total cost of the JOURNAL was $7,938.70 as compared with $6,930.26 last year. For the first time in five years we note a slight increase in the income of the JOURNAL. The increased cost of printing, due to the NRA schedules in our printing plant, however, more than absorbed this increase, leaving a deficit of $1,008.44 as compared with a deficit of $1,647.02 last year. This is the fourth in twenty-eight years in which the JOURNAL has not more than paid its expenses. Our relatively favorable advertising income is again due to the loyalty of our members in giving their patronage to those announcements which appear in our advertising columns. We are confident that 98 per cent of those who receive our JOURNAL read it. Its value to them is apparent. This Association guarantees the financial integrity of the advertising columns of its JOURNAL. This has enabled us to retain a large part of our advertisers and will enable us to gain others as rapidly as their financial recovery takes place.

The Council, in this connection, desires to express its gratitude to the American Medical Association and to its Cooperative Medical Advertising Bureau for its effective work in continuing to secure national advertising under such difficulties. We desire to especially express our appreciation of Messrs. Braun and Mattson of the Business Department of the parent organization, who have personally done such effective work in this connection.

The JOURNAL has continued to comply with the established policy of the Association and has published all of the articles read before county societies, as well as the scientific proceedings of the sessions of this Association. There is a natural difference of opinion as to the wisdom of this policy. The Council has felt that it is best to continue it. The annual volumes of the JOURNAL provide a fair index of the state of medical knowledge, and one who will take the trouble to compare the volumes of the JOURNAL from year to year will take great pride in the increased scientific knowledge of the medical profession and its constantly increasing ability to better serve our people.

The Councilors desire to call to the attention of the profession the educational value of the exhibits at the annual meeting. These exhibitors are carefully selected from among a large number of applicants, and they present to you, in an attractive and interesting way, the annual improvements in medical and surgical armamentaria. The exhibit

this year has been kept small and the Council desires to urge those in attendance to carefully study it.

Our delegates to the American Medical Association reported its recommendation that a committee on physiotherapy be appointed. Dr. Virgil Simpson was made chairman, and at his suggestion arrangements have been made for a scientific exhibit on this subject, to which the attention of those in attendance upon the meeting should be particularly directed. Along these lines, much of value in medical service is being developed and much that is worthless is being offered. It is particularly important that the professional organization shall differentiate between the two.

Dr. Virgil Simpson for many years has been a representative of this Association on the National Pharmacopeal convention that has charge of the revision of this important standard publication. The Council has arranged for a room for an exhibit, which is of tremendous value to every practitioner in the state.

Through the efforts of Drs. Wallace Frank and Duffy Hancock of the Committee on Cancer Control, the Council will be able also to present a splendid cancer exhibit. Those three exhibits would repay us for our attendance at Harlan were there nothing else on the program.

For the past ten years the Association has cooperated with the State Board of Health in the enforcement of medical practice and other health laws. The House last year authorized the expenditure of not to exceed $1,000 for this purpose. We were not called on for any expenditure from this appropriation.

In cooperation with the allied professions of dentistry, pharmacy, nursing and embalming, which are more or less loosely combined in the State Department of Health, under the recently enacted Reorganization Act, a Bureau of Registration is being set up, of which Dr. John G. South, a former president of this Association, has been made Director, and he will devote his full time to its affairs. The chief inspector of this bureau will be an experienced attorney who will also give full time. Thus Kentucky is joining New York, New Jersey, and the other progressive states which have determined to protect their people from incompetency and corruption in those professions that are furnishing services which are classified in the medical service group. All of the professional groups involved are enthusiastically cooperating in this program, and the Council very cordially recommends the appropriation of not to exceed $1,200 be continued for this purpose for next year.

Under our unfortunate and clumsy system of court procedure, the constant changing of county and commonwealth attorneys, elected under our partisan and political system, too frequently results in the election of men who are not sufficiently energetic or interested in law enforcement to effectively enforce the medical and health or in fact any of the other laws of the Commonwealth. It is indeed surprising, under such a system, that the majority are such good officers. Realizing, as physicians do, the vital importance of the health and medical laws, it is natural that irritation will frequently arise amongst them because of failure in their enforcement. In those sections of the state where physicians have joined with other progressive organizations of citizens in the selection of worthwhile attorneys as court officials, there has arisen no complaint. Complaints of evasion of the law come from the poorly organized counties and districts which continue to select these officials as reward for political service or because of the predominating influence of some special interest, and it is apparent that it will be impossible to improve conditions in these sections until public opinion has been educated as to the importance of the selection of competent officials. This year again our attorneys have assisted in the preparation of more than 111 cases, and they have been effectively aided by the Commonwealth and county attorneys in many sections of the state.

The Medico-Legal Committee again reports a marked reduction in the expense of its attorney's fees as compared with previous years. It was $850 this year as compared with $1,100 last year, $1,129.48 in 1932, $1,125 in 1931, and $1,025 in 1930. Court costs this year were $20.76 as compared with $59.95 last year and $190.25 in 1932. The Council desired particularly to commend the excellent management of this committee by its Chairman, Dr. J. B. Lukins. His appearance before many of the county and district societies and his clear exposition of the principles underlying the medico-legal relations of the profession have been of inestimable value in the protection of the welfare of the physicians of the state.

The high plane on which this committee has conducted its procedures under the chairmanship of Dr. Lukins and his predecessor, Dr. Moren, has materially contributed to the professional value of the services of the physicians of Kentucky. The Council also recommends that the Association express its thanks to Honorable Roy B. Curtis, our chief counsel, for his excellent

supervision of the actual court presentation of these cases. The report of the committee will go into further detail and will make recommendations that will merit the attention of the House.

Last year an appropriation of not to exceed $1,200 was made to continue the active work of the Committee on Public Policy; $1,111.60 of this appropriation has been expended, and Mr. Blackerby will make a report of the work he has done during the year. The Council recommends that this appropriation be continued.

The Council reports the continuation of the splendid service rendered by the Irvine McDowell Hospital for trachoma, located at Richmond. This excellent institution, instituted as a living memorial to Ephraim McDowell, the immortal father of ovariotomy, in a building bequeathed to the medical organization of Kentucky by Dr. McDowell's granddaughter, Mrs. Elizabeth Irvine, has restored to usefulness hundreds of Kentuckians who would otherwise have been blind. Recognition of the value of this service by the legislature was indicated by the increase of the state appropriation from $7,500 to $9,200. The United States Public Health Service provides the balance of the maintenance cost, and together with the State Department of Health furnishes the personnel. The profession and the people of the state are grateful to the United States Public Health Service for continuing to provide Dr. Robert Sory as the Director of the Hospital. We believe that no other medical service institution has been conducted more efficiently or economically.

In view of the widespread announcement that committees are studying the subject of social insurance from the Federal standpoint and because of the tremendous interest of our profession in this subject it was discussed at a special executive session of the House of Delegates of the American Medical Association at Cleveland at its recent session The Board of Trustees did not recommend any plan, but it did suggest, and the American Medical Association has recommended, that all of its constituent bodies adopt as bases for the conduct of any social experiments that might be contemplated by them, the following:

First: All features of medical service in any method of medical practice should be under the control of the medical profession. No other body or individual is legally or educationally equipped to exercise such control.

Second: No third party must be permitted to come between the patient and his physician in any medical relation. All responsibility for the character of medical service must be borne by the profession.

Third: Patients must have absolute freedom to choose a duly qualified doctor of medicine who will serve them from among all those qualified to practice and who are willing to give service

Fourth: The method of giving the service must remain a permanent, confidential relation between the patient and a "family physician." This relation must be the fundamental and dominating feature of any system.

Fifth: All medical phases of all institutions involved in the medical service should be under professional control, it being understood that hospital service and medical service should be considered separately. These institutions are but expansions of the equipment of the physician. He is the only one whom the laws of the nation recognize as competent to use them in the delivery of service. The medical profession alone can determine the adequacy and character of such institutions. Their value depends on their operation according to medical standards.

Sixth: However the cost of medical service may be distributed, the immediate cost should be borne by the patient if able to pay at the time the service is rendered.

Seventh: Medical service must have no connection with any cash benefits.

Eighth: Any form of medical service should include within its scope all qualified physicians of the locality covered by its operation who wish to give service under the conditions established.

Ninth: Systems for the relief of low income classes should be limited strictly to those below "comfort level" standard of incomes.

Tenth: There should be no restrictions on treatment or prescribing not formulated and enforced by the organized medical profession.

To the report of the Board of Trustees, which was also adopted, we append the following comments:

If it is determined in a community that some experiment to change or improve the method of administering medical service is desirable, observance of these principles will remove many of the disturbing influences from such an experiment. In all such experiments, attention must be sharply focused on the quality of medical service.

Such restrictions will undoubtedly lower the enthusiasm of many of the present advocates of such schemes. They remove the interest of the politician, the commercial promoter and all those who consciously or unconsciously are seeking to achieve other

objectives than better medical care for those unable to provide such care for themselves under present conditions. All these principles are directed toward protecting the character of the service to be given, and all are directly designed to guard against abuses which experience shows are bound to arise when these principles are neglected. In most communities it will be found that comparatively few changes in the methods of administering medical care will be necessary. That type of medical practice which preserves the personal relationships between physician and patient, that maintains the practice of medicine as a profession, and that has withstood the test of centuries must be preserved for the best interests of both the public and the medical profession

The Council recommends the adoption of these principles by this Association.

At our last meeting the Council presented the efforts of this Association, through many of its county societies, to cooperate with the Federal Emergency Relief Administration in providing medical service for the large number of families on relief in Kentucky. Kentucky is the only state in which the Federal Emergency Relief Administration has absolute and complete control not only of the method of its operation, but in the selection of its personnel. Neither the Governor of the Commonwealth nor any state officer has anything to do with its policy, methods, or with the control of its service. It was to be expected, therefore, that in the conduct of its affairs it would furnish a model for other states.

It is not within the province of the Council to discuss any other of its policies than those provided for medical service. The tentative plan for providing medical service for relief clients was inaugurated by Mr. Gatton, in cooperation with the Council. It was expected that this experimental plan, which was frankly recognized by both parties to it as purely experimental, would be modified from time to time by mutual agreement. However, since the Federal control of relief in Kentucky, the representatives of organized medicine have not been consulted in regard to any modification and its offer of cooperation was never acknowledged. We have asked the delegates from the various counties particularly to report on this subject, and will recommend that these reports be referred to the Committee on Medical Economics, which has also been making a study of the subject.

It is the deliberate opinion of the Council that the methods for providing medical service for relief clients in Kentucky contain all of the worst features of socialized state medicine and that this experiment should be modified so as to render more effective service. We are confident that it is being done quite as well in those counties which have not accepted the plan as in those which have and at much less expense. We believe that an effective plan under professional control can be developed that would enable the Relief Administration to provide adequate medical service and provide reasonable compensation for the members of the profession who render it.

The Council again desires to congratulate the officers and members upon the fine accomplishment of the Woman's Auxiliary. If the physicians in the counties which have not yet organized Auxiliaries read the Quarterly Supplements of the JOURNAL and permit them to be read by the women of their families, it is difficult to understand why there is not an active Auxiliary in every county in the state. There is no question but that there is increased interest in the county societies where Auxiliaries exist. The Quarterly Supplement to the JOURNAL has been published without cost to the Association, and every issue has been paid for promptly upon its publication.

The Council is particularly grateful for the contributions of the Quarterly to medical history and to the lessons in medical service which are valuable not only to the members of the Auxiliary but to the profession. The Council recommends that the Auxiliary be requested to continue the publication of the Quarterly Supplement to the JOURNAL. It further recommends that an appropriation not to exceed $500 to assist in the development of the Auxiliary be made next year. The only expenditure from this appropriation this year was $48 for the luncheon at Murray.

The efforts of the Auxiliary to increase the subscription in Kentucky to Hygeia, the medical service education organ of the American Medical Association, are particularly commended. It is interesting the 90 per cent of the subscribers to Hygeia are in the counties with organized Auxiliaries.

The Council desires to report the acceptance by its chairman of the Doctor's Shop at Harrodsburg, as a memorial to the pioneer physicians of the state who brought medical science into the state prior to 1800. The proceedings of the special session of the Association called by the President to dedicate the plaque on this memorial will be published in the JOURNAL and will be an important contribution to the history of Kentucky.

The work of the Committee on Post Graduate Education, under the chairmanship of Dr Barbour, is particularly commended, and it is recommended that this committee be

continued. Dr. Barbour will present a report on this subject which will indicate its success.

The Council again desires to emphasize the importance of the preservation of the integrity of the organization of the county societies themselves, regardless of the interest that is being developed in Councilor district associations. The increase in value of these Councilar district associations is unquestionable, but it should be remembered that the leaders of the medical profession will always attend medical meetings anywhere because they realize their value. In our type of organization the affairs of each county society should be considered by its own doctors and its meetings should be held within its boundaries so that every physician in the county may have the opportunity of participating in its discussions and in the determination of its policies.

The Council desires to express its appreciation of the splendid support it has received from the organized profession of the state. It is its desire to carry through the purposes of this Association as expressed by its House of Delegates. The reference committees have been studying carefully the subjects referred to them for some time. We bespeak their careful consideration that we may continue to better serve the people of our Commonwealth.

Respectfully submitted,

CHARLES A. VANCE, Chairman.

PRESIDENT MARTIN: This report will be referred to the Committee on the Report of the Council.

Next is the report of the Treasurer, Dr. McDowell.

SECRETARY MCCORMACK: Dr. McDowell has not arrived yet. His report was published in the JOURNAL a month ago and I move that it be referred to the Auditing Committee for final report.

The motion was seconded and carried.

PRESIDENT MARTIN: Next is the Secretary's report.

REPORT OF SECRETARY

SECRETARY MCCORMACK: Mr. President and Gentlemen: This has been a very busy year in the affairs of the Association. More meetings of county medical societies have been held this year than in any year for probably twenty years. This is due to the appreciation of the profession of the tremendous problems that confront us in this changing social life that is confronting the whole nation. We are becoming socially conscious in a way that we have never been before. While it is being brought to each one of us, probably gradually, we are bound to realize that, in the tremendous changes that are taking place in the business affairs of the nation, in its fiscal affairs, in the relationship between government and the individual citizen, there are problems that involve us along with all of the other citizens of our country.

It is perfectly apparent that this is an age of organization. Individually and singly, we can have very little influence on the development of affairs; combined, we are a real power, and under the code system that has been adopted through the NRA, we find ourselves in tune with the methods of organization.

We were the first of all organized bodies to develop a code. It was developed with the sole purpose of making our profession more useful to the people we serve, of maintaining peace and harmony amongst ourselves, and of developing those professional attributes that distinguish our profession from all others and place us on a higher plane than any other organization amongst men.

I think it was particularly gratifying, and I know those of you who were present last night were gratified, to hear the splendid presentation of the Society of Christian Physicians at the Baptist Church, under the presidency of Dr. Barbour, when Dr. L. E. Smith developed an address that, if listened to attentively, thoughtfully, would solve most of our problems, because it is merely the spirit of service in which we do our job that makes it possible for us to continue to give the kind of remedial and preventive service that modern science alone can give to people.

We have had an experience in regard to state medicine that should, I think, be in the relationships that have been brought about through the Emergency Relief organization, of tremendous value to us and of distinct value to other states. When the American Medical Association determined to do its level best to cooperate with governmental and other agencies in the relief of the army of unemployed that had suddenly been mobilized, you might say, in this country under the Relief organizations, Kentucky rather reluctantly took part in the procedure. As would naturally be indicated by our type of organization, the matter of cooperation with the Relief organizations was referred to the several county societies, and each county society determined for itself whether it would accept or reject the proposal that was then submitted under Bulletin 7 of the Federal Emergency Relief Administration.

The distinguished citizen of our Commonwealth, Harper Gatton of Madisonville, who was then State Relief Director, took the

matter into very serious consideration and attempted to adapt a plan from those submitted in other states that would be acceptable to our profession and would be serviceable to our people. It was recognized that this was an experimental plan; it was expected that development would be made from it, through the cooperation of this organization, through its Council, and the Relief Administration. Unfortunately, changes occurred, due to matters over which we had no control, that defeated this purpose.

In some eighty of our counties attempts have been made to carry on with the work, and I think it is extremely complimentary to our profession that these efforts have been as successful as they have.

Recently we have seen the very results that might have been expected from such a socialization of medicine. At the beginning, the very meager fees that were provided for professional service were paid when the rather difficult and tedious red-tape procedures connected with the accounting system were carried through; but, due to lessened funds, in all probability, arbitary amounts have been now set for medical service in each of the counties. These are wholly inadequate for any service in most of the counties involved, and many of the counties which have heretofore cooperated with the Relief Administration are now setting the plan aside and many individual physicians have failed to file any of their accounts because of the difficulty of collecting. This will be an increasing difficulty. The plan as originally operated was bad enough. We were doing far more than our part. The medical profession was the only group that was called on to render service to this large group of unemployed people that was not paid current prices for service or wares. The grocer, the druggist, every individual who was called on to render service was paid the ordinary price that they charged for such service. We had accepted a plan in most of the counties of the state under which we would have collected practically a third of the ordinary professional fees. Now to be arbitrarily deprived by an individual who has nothing to do with the profession, no professional knowledge, who is merely a temporary appointee of the Government, gives us exactly the idea of what would be set up under a state or bureaucratic control in the practice of medicine, and, it seems to me gives us the whole picture of what we would be constantly up against were such a plan adopted.

I am impressed with the importance of this problem. We have learned from the public press that committees have been appointed by the President to formulate legislative policies in regard to unemployment insurance, old age pensions and health insurance, and that their deliberations and their recommendations will be presented to the Congress shortly. It is of such tremendous importance that these recommendations when presented be such as are feasible and are under professional control and in accordance with principles set forth by the profession, through its national organization, that I believe the matter should be very carefully considered by the county societies and that we should contact our Congressmen and Senators in such way as to enable them to help bring their influence to bear on these committees that are formulating legislation. After it is formulated, it would be too late; the house would be on fire and almost burned down before we got our connections with the water supply to help get rid of the flames. If we wait until then it will be too late, because whatever bill is presented by such a group, with the approval of the President, will, in all probability, be enacted into law by Congress.

We know that such legislation is fraught with great danger to the profession. We know that there are many undesirable features about even the best plan that has been adopted anywhere. While a great many other countries have socialized medicine to a very considerable degree, we realize that if anything of this sort is to be done in this country it should be done only after consultation with and under the advice of the organized profession that is alone able to give this service.

In a recent publication of the proceedings of the Twelfth Annual Meeting of the Directors and Scientific Experts of the Milbank Fund, the organization which is most actively supporting such legislation, the statement was made by Mr. Harry Hopkins, who is the Federal Emergency Relief Administrator, that it made very little difference what organized medicine said, that there were enough physicians everywhere who were willing to accept any plan that gave them money, that they would have no difficulty in putting it over, no matter what it was.

He expressed a very high appreciation of the science of medicine, he expressed his gratitude in glowing terms to the medical profession for their achievements and for the quality of service rendered, but I think it is well within the record to say that it is the purpose of the recently created or the self-created group of people who call themselves social workers—who remind me a good deal of our own specialists—to assume that, because they are specialists in social

work, nobody else has any right to say anything about it. My contention is that every doctor is a social worker and that every citizen who renders public service is a social worker, just as much as those who denominate themselves social workers after their short periods of training and the very slight experience that most of them have had. It seems to me that we have the right to make ourselves heard. In most of the great nations of the world the profession has been silent until after the laws have been enacted.

We have had the experience in Kentucky, under the workmen's compensation law, of permitting a law to be written by the great insurance companies of the nation that has borne very unfairly, very unjustly, on the medical profession. We have given all the service under the workmen's compensation law, and all the profits have accrued to the great insurance companies who have absolutely controlled the legislation and policy in this state. We all know it. The law was written under the stress of an emotional appeal that swept over us from England. After seeing the enormous evils in the old system of court adjudication of workmen's compensation, we were willing to accept almost anything; and yet, we have seen the great difficulty that our legislative committee has had in presenting the just claims of the profession to the General Assembly since that time.

I think we should not be found asleep when these matters are considered. I think the principle should be insisted upon that there should be no connection between unemployment insurance and compensation for medical service, because, when there is, we merely become the signers of these nice little certificates of one sort of another, as we do in burial insurance and a good many other things, where we get to sign our names and let somebody else get all the money. I don't mean at all that the profession should become commercialized, but I do believe that, in any sort of social organization, our profession, which has rendered certainly better service than any other group that can be selected in this whole civilization of ours, should receive just consideration and that its claims should merit and should entitle us to demand consideration for the principles that we have developed through the traditional development of the science and art of medicine.

Looking to this end, I recommended to the Council and the Council has been good enough to invite Dr. R. G. Leland, the Director of the Bureau of Medical Economics of the American Medical Association, to be present at this session and to address us on this subject. Dr. Leland and his fellow officers of the American Medical Association have accumulated probably the largest body of study on this subject that has been accumulated in any one office in the world. All the experiences of other nations have been collected and the greatest body of literature assembled in any one place are in the offices of the American Medical Association, which is constantly working to serve us in these and many other important respects.

During the recent session of the legislature, a great many very important pieces of legislation were enacted for the benefit of the people of the state. Probably more progress was made, or started for improvement in our governmental system in Kentucky than had been made in the enactments of all the legislatures in the previous fifty years. Among these was a somewhat abortive reorganization bill of the state government. It wasn't complete. It is always difficult to put through radical changes in administrative procedures because nearly everybody wants to be left just as he is and he wants everybody else changed except himself, and we found ourselves no exception to that rule, because that is exactly what we want done in the State Board of Health.

We were successful in having the changes that were made so slight as to be practically negligible. The name of the State Board of Health was changed to the State Department of Health, and the name of the State Health Officer was changed to State Commissioner of Health. Those are practically the only changes made.

Our appropriations were very largely increased for the State Health Department, and as a result of that legislation, we were enabled to reemploy the fifty-six nurses who had previously been dropped and a large number of the sanitary inspectors who are carrying on the sanitation work of the state.

It was gratifying to find that, in the legislature, we had only three or four members in the House and Senate who were opposed to our policies, but that the practical unanimity of support that you have won through the years, continued, and the General Assembly was anxious and willing to do the things that would be pleasing to the medical profession, in giving it increased opportunity to give better service to the people of the state.

I want especially to express my gratitude to our President-Elect, Dr. Howard, for the very enthusiastic manner in which he has responded to the invitations of the county and district societies of the state and has presented to them the ideals and plans of organized medicine. I believe the profes-

sion is better acquainted today with the problems that confront us; I believe that is the reason for the increasing interest in society meetings; I believe we are less concerned with the petty, personal things that have reflected in our deliberations sometimes than we ever were before, and that we are ready and willing to determine upon great policies and to move forward as one in our determination to preserve for our people a medical profession that can really serve them.

It has been a great privilege to be present with Dr. Howard at a great many of these meetings. I have had the opportunity of being at more county societies during this year than in any previous year during the twenty-eight that I have been secretary of your Association, and I have found an interest on the part of every doctor, not merely those who have always been interested, but of every doctor in these problems.

Confused we all are, some, about the developments; they are happening so fast that it would necessarily confuse anybody, but we are seeing, as clearly as it is possible to see in a maelstrom of social development, the problems that confront us, and we are being thoughtful about them. Contributions to our Journal, contributions to the Journal of the American Medical Association and the other state journals, are all indicating such an increase in professional interest that I am sure it will mean an increase in the opportunity for professional service.

It has been a real pleasure to serve the profession this year, as it always has been. I am grateful to every one of you for the fine support you have given and for the constant advice you have given, and, as I expressed to one of the members today, particularly for the criticisms you have made, because if you merely say to me, "Go ahead and do what you are doing or what you have been doing," I do the best I can that way, but if you really tell me what you have in your minds that will be of benefit to the profession and to the people of the state, if you really help to formulate the policies, if you really help to demonstrate the altruism and the fineness and the spirit of medicine, you are doing those things that have heretofore made and will always make our Association peculiarly successful and effective in its administration of public health and medical service to the people of our beloved Commonwealth. (Applause)

PRESIDENT MARTIN: The Secretary's report is referred to the Committee on Reports of Officers.

Next we will have reports of the Councilors by Districts.

FIRST DISTRICT

V. A. STILLEY, Benton: Mr. President and Members of the House of Delegates: It has been an honor to represent the First District as Councilor for more than fifteen years. I think I can say truthfully that our profession in the First District is better organized, we have had more meetings of our county as well as our district and sub-district societies this last year than we have had heretofore.

We have a district society, and instead of meeting twice a year, as we had done before, we meet now very three months, that is four times a year. We have two sub-district societies that meet every three months, and we have a county society in practically every county in the entire district.

Dr. McCormack made part of my speech in saying that we had had more meetings. That is literally true in so far as the First District is concerned.

In most of the counties we have a well organized woman's auxiliary. We think that that has increased the interest and attendance at a good many of our meetings. I know they are better than they have been heretofore, and we think that is due largely to the active work of the woman's auxiliary. They stimulate these First District folks to go to the meetings, and if some of the members from the other districts or some of the counties where you do not have active organizations will just let them organize an auxiliary and have a supper or a dinner—we fellows call it supper—and all get together and let the women talk over their organization and the doctors have their scientific program, it will be just a very short time until you will have an active society. You know we couldn't get along very well without them, but they do stimulate the attendance of the meetings in my end of the state.

I am very glad to report that taking it as a whole the First District is as well organized or better than it has been at any time during the last fifteen years in which I have had the honor of representing it.

THIRD DISTRICT

C. C. TURNER, Glasgow: Mr. Chairman and Gentlemen of the House of Delegates: I wish to submit the following report of the Third Councilor District.

According to the paid-up membership for 1934, the Third District has 109 members and 52 non-members. The county society register is as follows:

| County | Members | Non-Members |
|---|---|---|
| Allen | 7 | 1 |
| Barren | 16 | 1 |
| Butler | 2 | 3 |
| Christian | 29 | 7 |
| Cumberland | 6 | 0 |
| Logan | 16 | 3 |
| Metcalfe | 3 | 2 |
| Monroe | 1 | 7 |
| Simpson | 9 | 1 |
| Todd | 7 | 4 |
| Warren | 13 | 23 |

Total 109 or 68%; 52 or 32% plus

This shows practically the same per cent of paid-up membership as last year.

Barren, Christian and Warren hold regular monthly meetings. Allen, Logan, Simpson and Todd hold occasional meetings, whereas Butler, Cumberland, Metcalfe and Monroe, because of the scarcity of doctors, seldom hold meetings of their own, preferring to attend meetings in their neighboring counties.

For the past several years the Third District as a whole has held bi-monthly meetings at Bowling Green, Glasgow and Hopkinsville. These meetings are well attended. An excellent program is given in part by its own members and by invited guests from Louisville and Nashville.

There is a splendid feeling of fellowship and cooperation among doctors throughout the Third District as well as loyalty and devotion to the State Medical Association.

Throughout the year there has been but one incident to mar the peace and quietude of the profession, the matter of a malpractice suit. I shall herewith submit the attorney's report in his own words:

On Sunday, March 18, 1934, a car which was owned by ——— and driven by ——— the latter of whom was accompanied by——— skidded off of the road and in the accident ————sustained certain injuries including two broken fingers. Immediately after the accident, ——— went to the local hospital and requested that Dr. Richards be called. The doctor made an examination and set his fingers in splints. A few days later the splints were removed and the fingers then placed in a cast and ———— was advised to let same remain the usual length of time.

The attorney for the insurance company made appropriate investigation and arranged for ———— to come to his office on March 22, 1934. On the morning of the 22nd, an attorney called from his office and advised that he was representing ———and wanted to effect a settlement, if possible. He advised the writer to meet them in Dr. Richard's office, which was done, and while there the fingers were observed. Dr. Richards was asked what he thought about them, and he then advised that it could not be determined just how they would respond to treatment, that they might not give him any trouble and then they might, that at that state he just could not state how they would respond to treatment.

After considerable time a settlement was effected with ———— for the sum of $100, for which draft was executed and releases obtained on March 22, 1934. ———— had an arrangement with his attorney whereby the attorneys were to receive an amount equal to fifty per cent of any recovery in the case. After we declined to pay over $100, the attorney called Dr. Richards and asked him to reduce his bill, and the attorney then agreed to give ————$50 of the amount recovered, which was to be net to ————.

———— did not wait for Dr. Richards to examine his fingers and remove the cast at the proper time, but removed same himself and as his testimony on cross-examination discloses, he had no assistance in removing same, but merely used a large butcher knife in releasing same. Sometime after the cast had been placed on the fingers, an x-ray was made of them and they were in perfect condition, as the x-ray picture discloses.

———— did not return to Dr. Richards for treatment after the cast was removed.

He obtained the services of a lawyer at Scottsville and filed suit against Dr. Richards for malpractice for $2,000, alleging that his fingers were crooked by reason of not having the proper care and attention.

We filed demurrer to the petition, which means taking the pleadings on their face they do not state a cause of action. We also filed answer on behalf of Dr. Richards and set up the release which we had obtained from ———— in release of the original injury and furnished the court which held in substance as follows: 'If the injured person uses ordinary care in selection of a physician, the law regards the injury resulting from mistakes or want of skill of the physician as part of the immediate and direct damage naturally following from the original injury.'

The court dismissed the petition on demurrer, and the plaintiff declined to plead further.

### Fourth District

J. I. Greenwell, New Haven: I am glad to report there is some increase in the paid-up membership of the Fourth District over the previous year. Most of the counties in my district are organized and have regular meetings, but some of the counties have only two or three doctors, and it is almost impossible to have any meetings. I think the Fourth District compares favorably with

other districts of its size in the state.

The extension course sponsored by Dr. Barbour had a very successful meeting at Bardstown during the summer. It was conducted by Drs. Horine, Lukins and Hume of Louisville. The attendance was very good, and it was thoroughly enjoyed by all present. The members of my district are very anxious that this course be continued.

The Muldraugh Hill Medical Society meets four times a year at Elizabethtown. Most of the doctors of this district are members of this society and attend regularly these meetings.

In closing, I wish to suggest that our worthy State Secretary would have a notice inserted in our Journal, or notify each county secretary by letter, that when sending out notices of his county meetings he include his Councilor in this list, so he can arrange to attend these meetings when possible.

### Fifth District

W. E. Gardner, Louisville: The Fifth Councilor District, which includes Jefferson County and eight other counties to the east and northeast of Louisville, has a total membership of 400 physicians in good standing as members of the Kentucky State Medical Association, at the time of publication of the September issue of the Journal. At that time there had been a total net increase in membership for the district of 14 over the corresponding period of last year. There have been some additions to the Jefferson County Medical Society, since the publication of the Journal, which along with other affairs of the society will be reported to date by Dr. Walter I. Hume, President, Dr. Charles M. Edelen, Secretary, or other delegates from Jefferson County. We are pleased to note an increase in membership from Franklin County, and that other counties in the district have either held their own or suffered only slight losses of membership.

As stated in previous reports on the counties comprising the Fifth Councilor District, there are a few who have only one, two or three members, and it is manifestly impracticable to hold regular stated meetings of a county medical society under such circumstances. Those in the district having larger memberships are well organized and have their regular monthly or semi-monthly meetings; particularly is this true of Franklin and Shelby Counties, two of the largest and most active county medical societies in the district, outside of Louisville.

Our district society, which meets at Carrollton, Kentucky, twice a year, on the second Thursday of May and November, and of which Dr. Owen Carroll of New Castle has been the secretary since its organization four years ago, has attracted a great deal of interest from our members both inside and outside of Louisville. Its programs have been varied and instructive, and while it has been the policy of the officers of the society to encourage the presentation of papers or case reports by physicians practicing in the rural districts, a few having responded most generously, which brought forth some of the most interesting and helpful discussions of all our meetings, it has been necessary in most instances to rely upon members of the Jefferson County Medical Society to supply the bulk of the programs.

Within the past year there have been conducted two medical institutes within the district under the sponsorship of the Committee on Post Graduate Education, of which Dr. Philip F. Barbour is Chairman. Both of these meetings were well attended and a definite sense of appreciation was expressed by those in attendance.

We regret that there is a prevailing modesty among physicians practicing in the small centers of population which might indicate a seeming lack of confidence in their ability to write medical or surgical papers and which has deprived the physicians of the larger centers of much valuable information which the so-called country doctor, nevertheless usually a real upstanding and well informed physician, has acquired through his own initiative and resourcefulness in a way that for many of us would make him a most valuable teacher, and this is recognized by his city brother much more than he perhaps realizes.

There is no great difference, after all, between physicians practicing in the city and in the country, except in matters of more convenient equipment with which to work and better sources of information through more frequent contacts with each other and what the other fellow is doing. These latter conveniences and sources of information, however, are not always an alibi for real intelligence, for there is a vast difference between a large storehouse of acquired information and real native intelligence, or what has been called ordinary common horse sense, and I doubt that either group has a monopoly on the latter. Without it, coupled with a feeling of consideration for his fellowman, a physician may perhaps be able to make a material success, but he will not have rendered the best service to the largest number of people. It is valuable to all, therefore, that we have medical societies for the exchange of ideas and constructive criticism of each other. It would appear desirable that every Councilor of the Kentucky State Medical Association encourage, in so far as it is

practicable, the writing of medical and surgical papers by physicians practicing in the rural districts or smaller centers of population, to be read and discussed for the benefit of all of us not only at city, county and district medical societies, but at the annual meetings of the State Association.

It has been the policy of the Councilor of the Fifth District to endeavor topursue such a course, and he has been pleased to note this attitude on the part of other Councilors to the extent that the program of this meeting, as well as those of other relatively recent meetings of the State Association, is showing a recognition of the importance of the so-called country doctor as a contributor to medical literature.

During my two terms as Councilor of this Association, the second of which will expire at the end of this meeting, it has been my pleasure to help support and uphold the hands of others more prominent in the affairs of the society, and there has not been a single exception among the ten Presidents under whom I have served that did not at all times give the Council his most wholehearted support and seek its advice regarding many important policies of the Association which had to be determined between its annual sessions. My association with other members of the Council has been most gratifying and there has always prevailed during my term of office a friendly spirit of cooperation that has been a real joy.

To say that the services of our distinguished Secretary have at all times been most valuable and indispensable to the Council would be like carrying coals to New Castle. Whenever he has found that the Council was really taking an interest in the affairs of the Association he has leaned heavily on it for advice, and while there have been differences of opinion at times between individual members of the Council regarding certain policies of the Association, he has always kept an open mind to constructive criticism and has not insisted that his opinion should prevail against a majority trend to the contrary.

I shall say in this connection, however, that in reference to the most important matters coming before the Association or its Council for serious deliberation, he has usually been right, and if in a few instances he acted in an emergency in our name, without our authority, it was at a time when the Council had permitted the Secretary to act for it more frequently than it has done within the past several years. Any embarrassment that came as a result thereof was only temporary, and the affairs of the Association usually went along about as well as if the Council had met formally and approved or disapproved some of the things that were done without its technical authority.

On the whole the Councilor of the Fifth District has only a few battle scars, but they have all healed perfectly and no sore spots are left after ten years of service to the Association, and while it would be the height of presumption to assume that he could be elected for another term of five years, even if he wanted to, he made up his mind definitely at the beginning of his second term that he would not permit his name to be presented under any circumstances for re-election, and he will adhere to that determination.

The past ten years have been a service of love and deepest interest in the welfare of the Kentucky State Medical Association, and while I have given considerable time to its affairs at a minimum of expense to the Association, I could have done much more. As part compensation for my delinquencies, I shall be glad to lend any assistance to my successor that he may request and give him my fullest cooperation. My interest in the affairs of the Kentucky State Medical Association and its subdivisions will not cease at the expiration of my term of office.

### Seventh District

Virgil Kinnaird, Lancaster: Mr. Chairman and Members of the House of Delegates: The Seventh District, as you know, is composed of a good many counties, all small. We have only one large county, Pulaski, and one town of any size, Somerset.

We have gained ten members this year. We had forty-eight last year and we have fifty-eight this year.

We have an organized society in each county with the exception of Wayne. Each year we have the Seventh District Councilor meeting at Crab Orchard. This past year we had a very splendid meeting and will continue to do so.

### Ninth District

S. C. Smith, Ashland: The Ninth District has shown a gain in membership of fourteen over last year. In 1933 we had a paid-up membership of eigthy-seven. In 1934 we had a paid-up membership of 101. Most of the counties gained some in membership, but a few of them lost.

This district is made up of ten counties. Boyd, of course, has the largest membership of any of the ten counties. Unfortunately, Boyd lost two this year over last, up until the Journal was published in September, but I think we have had two or more paid up memberships since then which would make us equal if not more than our membership in 1933.

In Lawrence County Dr. L. S. Hayes was the Secretary, and we have one of the most active county societies in the district there. They only have a paid-up membership of nine, but they are busy all the time and the attendance is usually very good, considering their number.

Boyd has been going along successfully. They always take a vacation in the summer months, but the time has come now when they are starting to work again.

The financial affairs of the doctors in Ashland have been such that our paid-up memberships have naturally not been what they would have been had conditions been normal.

In Greenup County we have a fairly active society. I think they have met almost every month.

Johnson meets occasionally. So does Carter. Pike has taken a new lease on life; they increased their membership from eleven last year to twenty-five this year. How long they will keep it up I don't know.

Magoffin County died a natural death a few years ago. I went up there and succeeded in bringing the corpse to life and I see they are almost gone again. They only have one paid-up member for this year. I don't know what I am going to do about that county, it seems you can't keep them alive. On the whole the district is in very good shape.

TENTH DISTRICT

C. A. VANCE, Lexington: Mr. President and Members of the House of Delegates: I certainly am sorry to hear Dr. Gardner's valedictory. It seems to me that about the time a man learns how to run his district he either resigns or they elect him President. I think we should discourage anything like that and stop such procedures. He is one of our most valuable members, and I certainly hope they will elect him at the election this year. (Applause)

According to the membership for 1934, the Tenth District has 232 paid-up members. The county society register is as follows:

| County | Members | Non-Members |
|---|---|---|
| Bath | 9 | 2 |
| Bourbon | 16 | 4 |
| Breathitt | 8 | 0 |
| Clark | 14 | 8 |
| Estill | 5 | 2 |
| Fayette | 102 | 33 |
| Jessamine | 7 | 6 |
| Lee | 5 | 0 |
| Madison | 25 | 14 |
| Menifee | 1 | 0 |
| Montgomery | 7 | 4 |
| Morgan | 2 | 9 |
| Owsley | 3 | 0 |
| Powell | 3 | 2 |
| Rowan | 4 | 1 |
| Scott | 10 | 7 |
| Wolfe | 5 | 1 |
| Woodford | 6 | 5 |
| Total | 232 | 98 |

Owsley County has been added to the roster of the Tenth District. When I was in Beattyville this summer I was informed that Booneville and Owsley County had no outlet except through Beattyville, so I notified the state association office of this fact and Owsley County was tentatively transferred to the Tenth District. I suppose an order from the House of Delegates will be forthcoming to this effect.

This register shows that we have lost a few members this year as we had 239 paid-up members last year. I have carefully studied the list of non-members in this district, and I feel that there are possibly forty or fifty eligible doctors in these counties and these men should be brought in; some of them have been members before. I talked with a number of those who have not paid their dues this year, but who formerly were members in good standing, and most of them did not feel that they could spare the money from their families to pay their dues to the county or state societies. Of course, this is all a result of the general depression, and I feel that these men will come in just as soon as they are collecting enough money. The rest have moved to other places and are not eligible for membership. I believe I have done more work this year in trying to get the former members to pay their dues, but I am sorry to say that I have not been very successful. I feel that this practice of trying to keep up the membership of the State Association by going around and seeing these men and assisting the secretaries to collect dues is one of the duties of the Councilor and every one of us should try his utmost.

Bath, Estill, Jessamine, Lee, Menifee, Morgan, Montgomery, Owsley, Rowan, Powell, Wolfe and Woodford Counties held occasional meetings.

Bourbon, Breathitt, Clark, Fayette, Madison and Scott hold regular monthly meetings and these are all well attended and usually have fine programs.

The Fayette County Society under the enthusiastic and aggressive leadership of Dr. G. B. Brown has had a most successful year. The meetings have been interesting and instructive, and each one has been attended by a large number of doctors, and many of the doctors in the nearby counties have come in for these meetings.

The Madison County Society has continued to have good attendance and excellent

programs and is one of our very best societies.

I wish to call to the attention of the House of Delegates that the Breathitt, Lee, Menifee and Owsley County Societies have all eligible doctors as paid-up members. They all certainly should be congratulated.

Several adjoining and nearby societies have had joint meetings this year, and I believe these meetings should be fostered, although I still believe, as I have stated many times, that a well organized, enthusiastic society in each county is very much better for the State Association as a whole than a number of district societies. The doctor who has a habit of going to medical societies will attend nearly every one within his reach, but he will be much more interested in his own society than one outside of his county.

During the last year I have not heard of any mal-practice suits being brought to court against any of our members in the Tenth District. I believe one of the very good reasons for belonging to his county society and State Association is the malpractice suit defense feature. The profession generally shows a great loyalty and interest in the State Association.

During the last year Dr. Charles B. Duerson, of Mt. Sterling, passed away. He has been for many years a loyal and enthusiastic member of his county society and of the State Association. Also Dr. L. C. Redmon, of Lexington, passed away. He has been an enthusiastic and loyal and active member of his county society and the State Association all of his medical life. He has also been an active member of the House of Delegates for many years.

Both of these men will be sadly missed by their county societies and the State Association and their many friends and relatives.

I would again urge that each county society select the best man available for secretary. The secretary is the most important officer of any society, and if he is efficient and popular that society is prosperous and enthusiastic.

SECRETARY MCCORMACK: Mr. President, I move that Owsley County be transferred to the Tenth District.

B. F. TYE: Owsley County has only one outlet and I think that is the best thing to do. I therefore second the motion.

The motion was carried.

ELEVENTH DISTRICT

H. K. BUTTERMORE, Liggett: Mr. President and Gentlemen: The conditions in the Eleventh District are very much improved over the year 1933. We have gained twelve in membership throughout this year. The county societies are meeting more regularly and putting on good educational programs. The doctors have been kept very busy and their collections are much better than they have been during the period of 1933.

The Eleventh District is backing Harlan in the entertainment for this meeting and we are doing everything possible to make this meeting a great success.

SECRETARY MCCORMACK: Mr. President, I would like to ask unanimous consent that Dr. Robert Sory, the superintendent of the Irvine McDowell Memorial Hospital at Richmond, be permitted to make a report of the activities of that organization during the last year.

As the Council has reported, the property of this institution is the property of this Association. It has loaned it to the state and Federal health departments to be used as a trachoma hospital. It therefore has been made a unique memorial to Dr. Ephraim McDowell. Dr. Sory, who during his entire professional life has been a member of this Association, has conducted its affairs with such distinction that it seemed to me that the whole profession should know more about his activities and the service of that institution to the people of the state.

PRESIDENT MARTIN: May we have that report from Dr. Sory?

DR. ROBERT SORY, Richmond: Mr. President and Members of the House of Delegates: This report of the work at the Trachoma Hospital at Richmond, Kentucky, covers the fiscal year ending June 30, 1934.

For that year the allotment of Federal funds was reduced because of economies that had to be made by the United States Public Health Service. It was, therefore, necessary for the State of Kentucky to increase its contribution towards upkeep of the trachoma work in this state. The Kentucky State Board of Health has been most cooperative in this so that during the year being reported and the year upon which we have already embarked, this state is now contributing fifty per cent of the cost of the work.

It seems wise to draw attention again to the fact that trachoma is not an acute disease with a more or less characteristic course in each individual. It is very insidious in its development, and an individual may be several months in realizing that there is anything seriously wrong with his or her eyes. A patient may be discharged by a physician with the disease entirely arrested, only to return a few months later with active pathology again present. This explains why there are many who must return to the hospital several times for treatment. There were 354 admissions to the Trachoma Hospital during

the year. Of this number, 114 were readmissions.

It has been observed repeatedly that the earlier a case can be gotten under treatment the better the response and the more likelihood of the disease remaining arrested. For this reason, physicians and county health officers are urged to be on the lookout for trachoma in the youngster. Also for this reason, the field work of the hospital is pushed as actively as finances will permit. One nurse, under the supervision of the physician in charge of the Trachoma Hospital, was employed throughout the year in searching for new cases of trachoma.

The hospital facilities at Richmond were so used as to take care of a greater number of trachoma patients than the year previously. This was quite an accomplishment when considering that funds for rations were reduced. Attention is drawn to the average ration cost for the year of twenty-three cents. For this sum, three balanced meals were served a patient for one day.

The average cost of a day's hospitalization throughout the year was $1.41. The average stay in the hospital was 28.4 days. In other words, it cost approximately $40.04 for the hospitalization of each patient.

Attention is drawn also to the fact that of the 560 new trachomatous eyes seen during the year, 319 were industrially blind from trachoma.

Many of the above low figures are possible because this State Medical Society has so generously provided a hospital building for which no rental is necessary. It should be stated, also, that the Louisville & Nashville Railroad still continues its generous policy of providing free transportation to and from the hospital for all trachoma patients needing such transportation.

There is appended a detailed statistical report for the year's activities. Also, there is attached a graph which dates from the beginning of the work in 1913 to the present date, showing for each year the number of new individual cases seen. There is one break in this graph during the years 1925 to 1927 when no trachoma work was being carried on.

STATISTICAL REPORT OF TRACHOMA WORK IN THE STATE OF KENTUCKY, FOR YEAR ENDING JUNE 30, 1934

| | |
|---|---|
| Hospital Capacity | 34 |
| Cases admitted to hospital during year | 354 |
| Number of cases, first admission | 240 |
| Days relief furnished | 10,070 |
| Number of operations | 223 |
| Grattages | 86 |
| Entropions | 52 |
| Rations furnished | 12,272 |
| Average cost of rations furnished | 23 cents |
| Average per diem cost | $1.41 |
| Average stay in hospital | 28.44 days |
| Total number of new individual trachoma cases seen in state | 280 |
| Number of new cases having pannus | 280 |
| Number of new cases having entropion | 90 |
| Number of clinics held in state | 6 |
| Number of persons examined at clinics | 947 |
| Number of homes visited by field nurse | 1532 |
| Number of persons examined in homes | 3230 |
| Number of pupils examined in schools | 3950 |

ROBERT SORY: I just want to give you gentlemen an invitation to come to see me if you possibly can. Thursday I shall be operating all day. If any of you come through Richmond on Thursday, drop out to the hospital and see me. I should like so much to have you there. (Applause)

SECRETARY MCCORMACK: In addition to the splendid professional work being done at this hospital, it is worth visiting because it has within its walls the most important collection of McDowell memorabilia that is in existence anywhere. It would pay you just to see the portraits of the McDowell family, furniture, and the other things that were made sacred by having been used by this great man.

We omitted on the program the report of Mr. Blackerby, who is acting field agent for the Committee on Public Policy.

JAMES F. BLACKERBY: During the fall and winter preceding the 1934 legislature there was talk among some members of the optometrists' and chiropodists' associations of seeking legislation giving then separate boards similar to that obtained by the chiropractors in 1928. We have reasons to believe that such talk was really started by one or more individuals who were in no way connected with the professions referred to. This suspicion was verified by subsequent developments. The only complaint voiced by those complaining was that the medical practice law, as related to their professions, was not sufficiently definite and specific to protect their particular interests. Several meetings were held with members of the examining boards and representatives of their associations, and after they were advised that a comprehensive reorganization bill, intended to consolidate numerous state departments, and provide for better law enforcement as related to each, would be considered by the forthcoming legislature, any organized effort to change the existing laws was forestalled and cooperative effort to correct any existing defects was assured. The fact

that the existing laws pertaining to the practice of medicine or any of the related branches is adequate to protect the public from empiricism and quackery is evidenced by the decison of various courts in the state in upholding the validity of warrants, indictments and injunction petitions secured and filed on a basis of the law as it now exists.

Secure in the belief that Kentucky has probably the best medical practice law of any state in the Union, we are zealous in the protection of this law from amendments or changes until experience or practice has shown that it can be improved. It is interesting to note that not a single demurrer has ever been sustained by any court passing upon the validity of a warrant, indictment or injunction petition based upon the medical practice law as now recorded in the Kentucky Statutes. All quackery, empiricism and violations of the law, as related to the practice of medicine or treatment of the sick and afflicted can and will be stopped as soon as adequate funds are provided for the employment of necessary investigators to secure evidence and counsel to prosecute actions based upon the evidence secured.

We are encouraged to believe that such a situation will result from the enactment of a bill by the recent special session of the Kentucky Legislature, providing for this the reorganization of all state departments and bureaus. Much talk was heard, prior to the regular legislative session beginning in January, 1934, as to the drastic changes that were to be made in our fundamental laws, but the regular session passed its sixty days' session without enacting much constructive legislation. It remained for the special session, convened in May, to pass, among other important and constructive laws, that providing for a reorganization of the governmental departments of the state.

It is doubtful if as much interest was manifested in any branch of the state government, as affected by this bill, as was the Department of Health, with the possible exception of the Department of Education. This is apparent since all the allied professions, such as dentistry, pharmacy, undertaking and embalming, barbers and beauticians, etc., were to be included in the newly created department. Among all the legislation proposed by the regular 1934 session and the subsequent special sessions affecting the medical profession, nothing was or could be as reprehensible as the original reorganization bill introduced at the special session in May. This bill proposed to create an examining and licensing board for the medical and allied professions, to be headed and directed by a man not licensed by or affiliated in any way with any of the professions concerned, and qualified only in the art of holding examinations. It is depressing to anticipate what would have been the results of the enactment of such a law. Perhaps the medical and all other professions would eventually have been pawns in the hands of unscrupulous politicians. However, all this was averted, and instead thereof a very progressive and forward-looking bill was enacted, which created a State Department of Health with supervisory authority over all the allied professions, yet leaving each of them to function as individual or entitive organizations, responsible to the State Department head for the fulfillment of their duties and obligations as prescribed in the law responsible for their existence.

During the 1934 regular and following special sessions, quite a bit of legislation unfavorable to the medical profession was talked of, and several bad bills were introduced. One measure, proposed and advertised by a licensed physician, would have changed the entire law relating to public health and would have removed this important public service entirely from the direction or supervision of the medical profession. However, the proponent of this vicious legislation received little or no encouragement, even from those on whom he might have felt he had a right to rely, and his bill, though drafted in great detail and at length, was not even introduced.

The only bill introduced and voted on that was intended to amend or repeal the present laws pertaining to medical practice or public health was the bill to repeal the egg candling law, and this was defeated in the Senate.

The Reorganization and Budget Control Bills, enacted and signed by the Governor, are calculated to strengthen the State Board of Health in its public health activities and to further safeguard the medical and allied professions from the encroachments of unqualified and unlicensed quacks who prey on an unsuspecting and gullible public.

During the past year we have met with or consulted the secretaries of 48 county medical societies with the view of increasing the membership and promoting better interest in the society meetings. Without in any way belittling the influence of the older family physician or those who have been foremost in the matter of medical organization, we believe the younger men in the profession should be asked and encouraged to assume a larger part in the affairs of the county and state organizations, in order that

their viewpoints may be extended and their responsibilities to the profession and the public as a whole be more fully appreciated. The spirit of self-sacrifice and service that dominated the lives of our fathers and grandfathers is not being manifested in the present generation, and the young physician of today needs badly the counsel and encouragement of the older doctor who has honored and dignified his profession and has thereby deserved and enjoyed the love and respect of his countrymen. But this is supposed to be a report and not an essay, yet I cannot refrain from alluding to facts and conditions which I sincerely believe are essential to the best interest of the medical profession and the continued respect and confidence of the public in the profession.

It is almost impossible to secure a jury in any court in the state that will convirt a violator of the medical practice law, no matter how flagrant the offense, and we are compelled to rely almost entirely on injunctions to stop illegal practice and quackery. Evidence in some of these cases would astound you.

We have secured sixteen convictions and had granted twelve injunctions in the past year, and have investigated over 100 cases of law violation by licensed and unlicensed doctors, and in all cases where the evidence justified, court proceedings have been instituted or charges filed with the State Board of Health for suspension or revocation of license.

PRESIDENT MARTIN: This is referred to the Committee on Reports of Officers.

SECRETARY MCCORMACK: In connection with Mr. Blackerby's report I want to call the attention of the profession again to and ask the support of the members of the House and the Officers of the Association for the efforts of the State Medical Association and of the State Department of Health to eliminate from the profession drug habitues and those who are guilty of violations of the Federal and state narcotic laws.

Under the plan of the uniform narcotic legislation promoted by the American Medical Association, the Bureau of Narcotics reports to the State Board of Health, in the form of information, evidence of violation of this important Act.

Court procedure is of value in getting rid of what they call the "underworld dealers" in narcotics, but the State Health Department is the only protection that the public has from these habitues.

Mr. Anslinger, the very distinguished Director of the Federal Narcotics Bureau, has done most effective work. We have more violators of these laws in Kentucky, in proportion to our medical population, than any other state in the Union. I think it should be made perfectly clear in this Association, particularly through the report of its Committee on Medical Ethics, that we propose to stop that.

Many years ago the State Board of Health adopted a regulation that conviction for violation of the Federal or state narcotic law should be considered grossly unprofessional conduct of a character likely to deceive and defraud the public. Notice of this was issued to every single licensed physician in the State of Kentucky, and I think it is of tremendous importauce that the profession should understand and lend its moral support to the movement to clean our house of this tremendous abuse.

PRESIDENT MARTIN: Next is the report of the Delegates by Counties.

Vice President J. C. Morrison, Hickman, took the Chair.

BARREN COUNTY

PAUL S. YORK, Glasgow: Mr. President and Members of the House of Delegates: The Barren County Medical Society has a paid-up membership of fifteen. We lost one member by his moving out of the county and gained one by transfer from the Jefferson County Medical Society.

Our society has adopted the plan of meeting quarterly. The reason for that is the majority of the members of the Barren County Medical Society also belong to the Community Hospital staff. We have monthly staff meetings. Each quarterly meeting is held at the Spottswood Hotel in Glasgow and the program preceded by a dinner. To date we have held two regular meetings and one called meeting. All meetings have been well attended.

The last quarterly meeting was held August 24 in conjunction with the Third District Medical Society. As our guest speakers we were honored with the presence of Dr. A. T. McCormack, Dr. Jethra Hancock, and Dr. J. B. Lukins, all from Louisville.

There have been no momentous questions discussed at any of our meetings concerning the medical profession. All of our programs have been scientific. This speaks for itself as to the harmony and good-will existing among the members of our society.

Since our last report before the House of Delegates there has been organized a Woman's Auxiliary in connection with out society.

The consensus of opinion among the members of the Barren County Society concerning the Federal relief as it affects medical care is that the members of the medical profession have been unjustly discriminated

against as to the scale of fees. The butcher, the baker, the druggist and tailor are paid prevailing prices for their goods, their margin of profit is the same for the persons on relief as for their other customers. Why, then, should the medical profession be asked to render its services to the members of the dole at ridiculously low fees? At the present time no official action has been taken on this question.

BELL COUNTY

JACOB SHULTZ, Pineville: Bell County has twenty-two members in good standing, one suspended for immoral conduct. We lost one valuable member by death last year.

Bell County is in good shape and the members who don't belong are perfectly able to pay their dues, but I think it is just contrariness.

I want to subscribe to the remarks of the gentleman from Barren County about Federal relief and his recommendation that the fees for folks on the dole be raised.

BOYD COUNTY

L. H. WINANS, Ashland: Mr. President Fellow Members: I am here rather unofficially for Boyd County. We meet once a month, except for two months during the summer, the first Tuesday of each month. We have a program gotten up by members of the society at each meeting, and the past year I don't think that a program has been skipped.

Our membership I believe is thirty-three. I don't know how many non-members we have.

We have been a little unfortunate in that some of our older doctors have been ill, Dr. Stevenson, Dr. Salmon, and Dr. G. W. Moore.

Our society has really been more active during the last two or three years, I believe, than ever before. We don't have so many troubles to meet with. Most of our troubles are probably due to ignorance. Where there is ignorance there is always suspicion, and I believe that the biggest trouble in our society is the fact that we don't understand the mechanism by which the State Medical Association works and by which the State Health Department works. That is always bringing up a question. Maybe we should know but we don't seem to know. I think that would be something that could be easily gotten around. I wonder why a page in the bulletin of the State Medical Journal couldn't be devoted to a discussion of how our society came to be and its purposes and how its members are elected and the relationships between one and the other. I realize that the By-Laws, and so forth, were all printed in the JOURNAL a few months ago, but I don't mean that, I mean a real discussion of the situation.

Also, I wonder if we couldn't figure out some way of electing delegates so that it would be necessary for the young and new members of local societies to almost have to attend state meetings. One of the doctors mentioned the fact that the younger men should come. I think that is a splendid idea, I know I myself this afternoon have gotten some ideas that I am sure will be valuable to the members at home, because I think perhaps we will understand things a little bit better.

I also want to say while I am on my feet that any time the State Society is looking for a place to meet, Ashland would be glad to have them.

CAMPBELL-KENTON

LUTHER BACH, Bellevue: The Campbell-Kenton Medical Society is composed of the two counties, Campbell and Kenton, meeting one meeting night in Campbell County and one meeting night in Kenton County. We meet regularly twice a month, the first and third Friday of each month.

We have had, during the year, eighteen regular meetings, one special meeting, twenty-six average attendance, two resignations from the Society; we have 97 paid-up members, 12 who are not paid up, 5 new members, 2 deaths, Dr. Furnish and Dr. C. W. White. Eighteen papers have been read during the year. Two read case reports. We had one banquet during the year.

A donation of $10 was given by the society to the Woman's Auxiliary for a special fund.

Dr. White was made chairman of the committee to confer with Dr. Wallace Frank regarding a cancer program.

CLAY COUNTY

J. L. ANDERSON, Manchester: Mr. President and Delegates: We have only eight doctors in Clay County, and it is a good big county, too. It is pretty hard to get over it. We have to do most of it horseback. That is the way I spend my life, with a foot in the stirrup.

There are five of these eight doctors that belong to our county medical society.

As to a program carried out by these five doctors I have no report to make, because we don't carry out any program and to report something that isn't I couldn't do, but these five doctors who do belong to the county medical society do possibly a great deal more public health work than is known even by our State Medical Association officers. Sometimes we do this until we get worked almost threadbare. We vaccinate and do all those things without compensation, and pos-

sibly without thanks, nevertheless we do it.

I don't know what you can do to enthuse our members as to a program. There are four of us there in the town of Manchester, and we see each other every day. I guess we get along pretty well. As a whole we have a good group of doctors. We don't fuss and we don't fight, there are no existing sores, and I guess we are getting along as well as we can, considering our conditions.

### Franklin County

L. T. Minish, Frankfort: The Franklin County Medical Society has completed one of its most successful scientific years.

There have been nine regular monthly meetings and three special called meetings. The society adjourned during the three summer months. At its first meeting last fall the society appointed a program committee. Each member of the society would, in rotation be responsible for the program of a meeting, but when such a member found it inconvenient or impossible to arrange a program, the program committee would automatically function. It was further urged that each member and the committee would endeavor to have visiting physicians read papers rather than to deliver papers themselves, so that the society would be assured of new ideas being brought to its meetings. Efforts are made to invite as guests those physicians who are outstanding in their special phase of medicine. It was also moved and seconded that the society invite physicians of adjoining counties to these meetings.

Accordingly the society had at its separate meetings the following guest speakers: Dr. Emmett F. Horine, Dr. Owsley Grant, Dr. James W. Bruce, Dr. C. W. Dowden, Dr. Octavus Dulaney, and Dr. Irvin Abell, of Louisville, and Dr. John Scott of Lexington. Physicians from Anderson, Woodford, Fayette, Scott, Henry and Shelby counties were frequent visitors at these regular meetings.

Four new members, Dr. B. B. Baughman, Dr. Grace R. Snyder, Dr. W. P. Blackburn, and Dr. R. D. Barton were added. A life member, Dr. John Glover South, who returned as U. S. Minister from Portugal, now gives the total membership of the society a number of twenty-three physicians. The society lost one member by death, Dr. R. B. Ginn.

Officers for the past year have been: Dr. R. M. Coblin, president; Dr. A. M. Lyon, vice-president; Dr. William Snyder, secretary-treasurer; Dr. L. T. Minish, delegate; Dr. C. T. Coleman, alternate delegate; Censors: Dr. L. T. Minish, one year; Dr. C. T. Coleman, two years, and Dr. F. M. Travis, three years.

### Fulton County

H. E. Prather, Hickman: Within the last year we have lost two of our outstanding physicians because of death, Dr. James M. Hubbard of Hickman, an elderly physician who had retired from active work, but had made a great contribution to medicine and to public health in our county, and when the local paper wrote an article upon the death of Dr. Hubbard, its beginning statement was: "Hickman's most beloved citizen has passed away." That was an absolutely correct statement. The other doctor who has died was Dr. Chester Wright of Fulton, a man in active practice who had the respect and love of his fellow physicians and who himself had always shown the courage to do what he deemed right.

As to our society, we have fourteen doctors in Fulton County. I did not get a detailed report from the Secretary before leaving home, but we have approximately one-half of those doctors paid up; on the part of those who have not paid it has been more or less carelessness, and I am quite certain, that it is not any disposition not to pay. The fraternal feeling among our physicians is the very best.

The two youngest men in the society occupy the most responsible offices. We have two men under thirty years of age, one is the president and the other is the secretary of our county society.

### Garrard County

J. E. Edwards, Lancaster: All the doctors in Garrard County belong to our county medical society, and we have had regular meetings during the year. We had papers read by some of the doctors or dentists. We included the dentists this year in our society meetings and asked them to meet with us. We have had some rather good papers presented by some of our dentists.

We lost one of our members this year, Dr. J. B. Kinnaird, who has been the dean of our society for many years.

I think the Garrard County Medical Society is in accord with the ideas expressed by the gentleman from the Barren County society. We feel that the doctors of Kentucky should be able to decide themselves when medical service has been rendered and when medical service has been sufficiently rendered. We are not willing to abide by some arbitrary decision by someone appointed by the Government who knows nothing about medical service.

We believe that the fees are out of all proportion to the service rendered, and there is no reason why the doctors should not be paid proper fees comparable with

other kinds of service that may be rendered, if they are to be paid fees at all.

As to the inequality of the fees paid for services, in other words, such things, as x-rays, they are entirely out of line. Fifty cents for an office fee is all we can collect. If there is a broken leg, all we get out of it is fifty cents for an office fee. Of course those are some of the things that the people who are directing relief don't understand.

PRESIDENT MARTIN: I feel like saying just a word here. As far as taking my fees from the RFC or the ABC or the XYZ or whatever you want to call it, I haven't taken any, and I don't know whether I am right, but I believe I am. If I had a dozen boys practicing medicine I would advise them not to accept any such fees as the doctor has spoken. If you have got to give it, just give it, and I think that is sufficient. (Applause)

GRANT COUNTY

N. H. ELLIS, Williamstown: The Grant County Medical Society was organized in June, 1931, by Dr. Blackerby and Dr. Hancock, with ten members. We have had a regular monthly meeting with a good attendance ever since, and with seemingly increased interest.

We have eleven physicians within the borders of our county, and twelve active members in our society. One member from the adjoining county of Owen is with us. Much credit for the success of our meetings is due our faithful secretary, Dr. C. A. Eckler, who is always on hand with some interesting correspondence. We are proud to say that we have 100 per cent membership in our society.

GRAYSON COUNTY

C. F. BLANKENSHIP, Leitchfield: Grayson County Medical Society has a membership of ten out of fourteen doctors in the county. We have tried to meet monthly for the past year, and we have missed a few meetings, but we have had a good attendance. Our programs since I have been down there, a little over a year, have tended to move more toward what the common general practitioner is interested in rather than super-scientific, highly specialized subjects, since there are not many men in Grayson County who do that type of practice. Men who have been there some time have expressed their idea that it has increased interest in the type of programs we are having, and we are getting along pretty well.

In connection with the public health work as Dr. Winans from Ashland mentioned a while ago, public health questions are discussed fully in the county medical society meetings. There is hardly a month comes along that something is not brought up in connection with public health, and the will of the medical society as expressed is carried out pretty well.

GREENUP COUNTY

H. T. MORRIS, Greenup: We have eleven doctors in our county and if I remember correctly, eight members. We meet monthly and usually have a very good scientific program. Sometimes some of our neighbor doctors from Ashland, sometimes from Portsmouth, Ohio, come to meet with us. Occasionally we have just a round table discussion.

We had one member move away. Two, I believe, have been dropped for non-payment of dues. I think our society is active enough at this time.

HARLAN COUNTY

CLARK BAILEY, Harlan: The Harlan County Medical Society is composed of about forty-five doctors with more than thirty active members who have paid their dues. Two doctors were lost during the past year through death, Dr. Goodwin and Dr. Sutton. One new member has been added and at this time the credentials of another applicant is in the hands of the investigating committee.

The medical society has regular monthly meetings with scientific papers presented by visiting doctors. No scientific paper has been presented by a member for the past several years. In following this plan our attendance has been good.

Most of our attention for the past several months has been directed toward the entertainment of the Kentucky State Medical Association convention in Harlan. Our members have worked faithfully to make this convention one whereby the visiting doctors will have been glad that Harlan was selected for the 1934 meeting. We have had the best cooperation possible of the business and professional men of Harlan who have demonstrated their desire that this meeting be a huge success. Splendid arrangements have been planned for the visiting doctors, and we earnestly request their indulgence while we make every effort possible to make their stay profitable.

I want to call your attention to this. We had two doctors in our county waited on by Federal authorities this year, one a colored doctor and the other a white doctor. One of the doctors is in the Federal penitentiary at Atlanta now and our colored brother is out on good behavior. We have had no doctor in good standing in our medical society, who has ever been convicted or even arrested for violation of the Narcotic Act.

JEFFERSON COUNTY

WALTER HUME, Louisville: Our very efficient Secretary has all the facts.

CHARLES M. EDELEN, Louisville: We have exactly 357 paid-up members in the Jefferson County Society. We have 411 on the rolls—all paid up by the night of our banquet.

We have lost a few members and also gained quite a few members. Dr. Hume has had quite an arduous year down there.

We have made some changes in the county society to take care of the full-pay people, who are taken care of by the doctor, the part-pay people who have not been taken care of and have been driven to the clinics, the can't-pay people who have been taken care of in our city hospitals and other charitable institutions, and now they have recently made plans to take care of the won't-pay class or the dead-beats.

Our part-pay plan was put over by our Economics Committee with a good deal of painstaking work on their part and with the cooperation of Dr. Hugh Leavell, our health officer. We met in Dr. McCormack's office one day and he lent his help to put it over. Through the arrangement with Dr. Leavell we have an investigative office in our city hospital, and every patient admitted to the hospital is investigated by a trained social worker paid by the City of Louisville, and she either admits that case or turns it over to a doctor of the patient's choice or to the Physicians' Exchange, which we own and operate, and the exchange then calls a doctor. Those people can't pay, of course, everything, but they are considered as part-pays.

For the won't pays we have recently started a credit rating bureau, and it is in process of being organized now. The committee in charge of that is Dr. Emmett Horine, Dr. Louis Frank and Dr. Lee Palmer. We hope that that will do a lot.

We have also changed our type of program in the county society. We have now one similar to the one put out by the Academy of Cincinnati, which we think is quite an improvement.

During the year on three or four occasions we have out-of-town speakers brought in by, for instance, the Tuberculosis Association, the Obstetrical and Gynecological Society, and so forth.

Our very able chairman of our program committee, Dr. Pritchett, has recently cooperated with the pharmacists in town and we are having a joint meeting with the pharmacists of Louisville, at which the Dean of the School of Pharmacy in Cleveland is to talk.

WALTER HUME, Louisville: Our medical society in Louisville is bigger just now than it ever has been before, with 411 enrolled.

SECRETARY MCCORMACK: Dr. Hume, I would like to suggest that you give the dates of the meeting, because we would like to have anybody from out of town come to it.

WALTER HUME: We would be delighted. We meet the first and third Mondays every month excepting July and August.

LAUREL COUNTY

G. S. BROCK, London: Laurel County has seven practitioners and seven belong to the Laurel County Medical Society. They are supposed to meet once a month, but they don't; they meet mostly on the streets and in the drug stores.

At the beginning of the year we had nine members belonging to the society. Since that time two have died. One of them you very well know, Dr. J. G. Owsley, our Sergeant-at-Arms.

We get along very well. Every one of us down there don't want to work, we want the other fellow to do it.

SECRETARY MCCORMACK: Mr. President, I would like to ask unanimous consent that we stand for a moment in silence as a tribute to the memory of Dr. Owsley. Dr. Owsley was for a long time Sergeant-at-Arms of this Association. He died suddenly and was buried in the uniform that he devised for himself for that office. I don't think we have ever known a finer soul than was in that really good man. He loved the profession, he loved to serve us, he loved to serve his people, and he was a fine example of the great general practitioner that makes the medical profession what it is.

The House of Delegates arose and stood in silence as a tribute to the memory of Dr. J. G. Owsley.

A. C. MCCARTY, Louisville: Dr. Barbour is not a delegate, but he suggests that we have some resolutions spread on the minutes to be sent to the family of Dr. Owsley.

CHAIRMAN MORRISON: I would like to appoint Dr. Barbour and Dr. McCarty as a committee to draft the resolutions.

LAWRENCE COUNTY

L. S. HAYES, Louisa: In the last year we have had seventeen practitioners in our county. Out of that number, one has committed suicide, two have left the county because of illegal practice. Of the others, nine are members of our county society. Two are very old and inactive, and we only have four that are really the backbone of our society. We recently had a malpractice suit filed in our county, and after that I think we will be able to get the non-members in. I think those things should be a stimulus to us all

and teach us a few things about why we should belong to our societies.

One man in our county, a very good man, took care of a delivery eleven years ago. At that time he had to carry his silver nitrate in a bottle instead of in the ampules that we use now. He went to his local druggist and asked him if he would prepare that bottle of one per cent silver nitrate solution, which the druggist did. This was a minister's family. When he started to put the drops in the baby's eyes he remarked that the old bottle looked druggy, and he said, "I have a new bottle, I'll just use it," so he produced the new bottle and used it.

The next morning the father called him up and told him the baby's eyes were badly swollen and asked him what he should do. The doctor said, "I'll come back and see them." He found the baby's eyes markedly swollen. He treated them and the baby recovered quite a bit and he now has probably forty per cent vision in one eye and other eye has normal vision. Eleven years later they have filed suit against the doctor and the druggist jointly for $20,000 damage, which sounds high.

The question is as to where the responsibility lies, if there is any responsibility, and of course incidentally I think it makes us all realize the importance of belonging to the state society, because the state authorities are getting busy and I feel pretty sure are going to help us out in this case. We don't feel that the doctor is in any way responsible; we feel he is absolutely blameless if there is any blame on anyone. We realize the fact that we have infections that develop in babies' eyes that sometimes put them out or very materially impair the vision which are not due to any fault of the drug that might be put in them.

Frankly, the doctor made a gross error in not having the silver nitrate analyzed. He took it back to the druggist and had it tested and it tested positive all right. The next morning when the doctor went back the father called his attention to the fact that on the scarf on the table where he set the bottle was a yellow spot. The doctor also had left the old bottle and the father had taken some of that and put on the cloth and it turned it dark. When they picked up the scarf a hole came out of the cloth where the other drop was. That, of course, would lead us to think there might have been some nitric acid in it, but we can't conceive of a registered pharmacist making up a one per cent silver nitrate solution and putting some nitric acid in it.

We feel that we have a fairly good representation in our county in the society, considering the number. We don't see much excuse for this so-called depression to keep us out of the society when we stop to think of the cheapness of our state dues and the type of JOURNAL we get, which is really a very excellent Journal.

I think if we will stress to our practitioners the value of the medical protection that we get, which is really worth while, more of these outside men will come into the fold.

One of the doctors spoke a while ago about public health affairs. While this is out of place, in a way, I am compelled to say a word about it. We have had some trouble with our health unit in the past, some doing a little private practice, some holding clinics that really got into the practice of medicine, but with proper and persistent attention to that we have a health unit now that is working beautifully and is really working to the benefit of the profession, which I have always claimed it would do and could do if it were properly handled. They go out now and teach sanitation and education and examine the school children. We strictly hold them to the school age. They don't attempt to interfere with us. They couldn't possibly reach everybody, so we draw a line some where that they can reach. Our county health unit is working very satisfactorily, and I don't think there is any doctor in the county that is dissatisfied with it.

As to the relief situation, we are one of the counties that object flatly to the fees offered; we think it is an insult to the dignity of the profession to accept such fees as are offered. We might take some particular case and let it go along, hoping to get a few dollars out of it, but as a rule we do not.

As to Dr. Smith's report on Johnson County, I think the only thing we can do is for the District Councilor to notify the men in his district to come for a meeting on a certain day and to keep doing that until we get them in the habit of having these meetings.

SECRETARY MCCORMACK: And eat dinner with them.

L. S. HAYES, Louisa: Absolutely, eat dinner with them.

I wish to offer my services to the Councilor if I may be of aid. I think there are plenty of men in our district who would be only too glad to do that, and we can bring these lifeless counties back to activity if we will put a little push and pep behind them.

SECRETARY MCCORMACK: Mr. President, I have had the privilege of attending a meeting of the Lawrence County Medical Society, and if the other secretaries would take the same method that Dr. Hayes has adopted in Lawrence County there would be no diffi-

culty about attendance; in fact, at the meeting I attended the attendance was about five times as big as there were doctors in the county. They had come from all around because his wife and the other good members of that Auxiliary had prepared the kind of dinner that a man would drive any distance to participate in. I shall always have a happy memory of the biscuits that I ate that day, with the necessary trimmings to those biscuits. I believe it was one of the most satisfactory and satisfying meals that I have ever seen served anywhere in my life.

If that plan were adopted there would be no trouble in getting doctors to attend, because they not only had a splendid program, but they had a wonderful meal.

MADISON COUNTY

J. D. FARRIS, Richmond: Madison County has thirty-nine practicing physicians, twenty-two of whom belong to the county medical society. During the past year we have lost three by removal to other locations and have gained one.

We have a program once each month during the year, with the exception of July and August, which we consider vacation months, and then an annual dinner program at which the officers for the next year are elected.

The programs are given by men of our county largely. We have exchange programs with Clark County. We go over and give their programs with members of our society one month and they come over and give us a return program the next.

Another feature of our program is the showing frequently, of scientific films which we get from various scientific places. One last month was on burns, which some of you have seen at the recent American Medical Association meeting. We have an interesting program, we have frequent visits from our Councilor, Dr. Vance, and we are always glad to have him. As a whole the society is progressing very nicely.

MCCRACKEN COUNTY

H. G. REYNOLDS, Paducah: Mr. President, I have a formal report from our Secretary.

"The society has met regularly each month since our last state convention, with the exception of the summer months of June, July and August. Dinner meetings are at the Ritz Hotel in Paducah.

"We feel that our society year has been a good one. There are forty (40) active members, no member having been lost through death during the past year. The meetings are usually well attended by the members of the society, and frequently by many members of adjoining county societies; especially is this true of those special programs where guest speakers in the various specialties were brought to us. The cancer program presented by Drs. Frank and Miller of Louisville was especially well attended. Many other interesting and varied programs were furnished, so that during the year practically all of the specialties were given some study and their various phases of current interest well presented."

Supplementing this statement, Dr. Gardner suggested that we have more of the so-called country doctors on the program in our county societies. That is the thing that we have begun doing this year. At our last meeting we had two rural doctors present on the program, and I really think that adds greatly to the interest of the doctors from the rural districts and that they will take more interest in the meetings.

Another gentleman suggested that the younger delegates should be sent. I am certainly willing and anxious for one to take my place.

SECRETARY MCCORMACK: I thought you filled that bill.

H. G. REYNOLDS, Paducah: I have been filling the bill so long I am willing to get rid of it. I think it would be a good thing, where there are two representatives from the county, that one of them be a younger man. A lot of our younger men are really not interested in the State Medical Association and they know very little about it. I think in that way they would possibly learn things that they have not learned in the past.

MARION COUNTY

G. G. THORNTON, Lebanon: In our county we have thirteen members of the county society. We have a pretty good membership in the Woman's Auxiliary

We have four county societies around there that meet four times a year, once at Lebanon, once at Middlesboro, once at Campbellsville and once at Columbia.

We have two members who have retired by virtue of infirmity. We have another who is now confined to his bed most of the time with heart trouble and it is not able to practice any more. The rest of us are getting along fairly well.

The only trouble that we have to contend with is this relief business that the rest of you are troubled with. Personally I never have accepted a fee, except once, and that was a case of obstetrics. I want to endorse the stand that our President took, not to accept it at all.

MARSHALL COUNTY

W. T. LITTLE, Calvert City: Marshall County has ten active and two non-active physicians, nine of whom are members of the

State Medical Society. We meet the third Friday evening of each month and have an active society. We are especially interested in the success of our county health unit, which is made up of a very active and efficient personnel.

We have acted as hosts to the district meeting twice during the past twelve months and to a meeting of adjoining counties once.

In making this brief report of our county I wish to tell you that the district society comprises about fifteen counties in Western Kentucky known as the Southwest Kentucky Medical Association and has done much to increase the ability of its members to practice medicine more scientifically by carefully planned and well attended programs.

### Mason County

Allen F. Murphy, Maysville: Mason County Society has held nine meetings since the last state meeting. The first one of these was a combined meeting with the Lincoln Valley District Society. In all of these meetings we used out-of-town speakers, as I reported last year. Probably the best one of our regular meetings was one at which Dr. Granville S. Hanes of Louisville was our guest speaker. They stayed so long that finally Dr. Hanes said, "Well, I've got to go to bed."

We have seventeen paid-up members. This represents a loss of one member from last year. There are seven non-members in our county. Of these, there are only two that are really active in practice. Two are retired and two do very little practice. One is a colored physician, and one of these active physicians we don't want.

The tonsil clinics reported as being held last year are still being held by the same five surgeons alternating nearly every week. There have been thirty-seven of these clinics held and they continue to be held without any trouble. Occasionally, as I reported last week, one gets in that doesn't belong there, but we put it down as an error and go ahead.

### Metcalfe County

P. W. Bushong, Edmonton: Mr. President and Gentlemen of the Kentucky State Medical Society: This is a very great pleasure to me indeed to represent Metcalfe County. This, if I remember correctly, is the first representation there has been from that county for seven years, and this is purely voluntary with me.

I have been very much pleased and very much interested and entertained to hear the reports of the fellow-practioners. I am small of stature (I don't care to go into that especially) and I am not the youngest in the house (and I don't care to discuss that), and it might be correct to say I am the oldest man in the house, and it is the first time I have ever had the pleasure of representing the county in a meeting like this.

We have a small county with only five doctors. Two of them are border men. Dr. S. R. York, the father of our good Dr. York here, is near the Hart County line and does as much practice in Hart as he does in Metcalfe. Dr. William J. Deep is on the other side, the Barren County line crosses his yard, and he does as much or more practice in Barren or Monroe as he does in Metcalfe. That leaves Dr. Bowen, who has been a member of the society for two or three years past but did not pay his dues this year. Dr. Dunham and myself are the only ones left, and we collected three dues this year up until about two weeks ago when we collected one other, so we have four paid-up members and one non-member in our county. I think we are getting along very well.

One thing I am glad to say, if it is in order to do so, is that infections and communicable diseases for a few years past have been reduced wonderfully. We had only about two cases of typhoid fever last year so far as I know, and I think they were imported. This year I think we have had two cases; I am sure that we had one. I treated that one myself. I heard of one other, and I don't know whether that was an authentic case or not, but I think it was.

I have heard the requirements of the RFC mentioned by several doctors in the audience. I have tried to respond to several calls, and in almost every instance I lost time and I could have better employed the time otherwise, but still, being in sympathy and in love with suffering humanity and indigent poor people, I responded, and would have done so, gentlemen, just as quickly if there had been no promise at all. It was so much trouble to make out the account, as one of the doctors said, and maybe swear to it, that I just felt I didn't care to have anything more to do with that kind of work.

Another thing I want to say that I am very proud of indeed. A few of us have been active pioneers in the work and have rendered assistance so far as we possibly could in the road problem. We have better roads now and we can get along with a fewer number of doctors. When I began practicing almost fifty years ago I think we had fourteen or fifteen practicing physicians in Metcalfe County, and today we have only five and two of them are border men. In those days I rode horseback, in floods and storms, in zero weather; my fingers froze

until I couldn't count the pulse of my patient and I couldn't shave. Men, I have had to break my feet loose from the stirrups, and I have been thrown from my horse and fallen from my horse with my feet fastened in the stirrups. But I escaped without very much injury and I am proud of it. I have counted myself an old country doctor.

We haven't had many public health meetings in our county because there are so few of us; the meetings are not of very much interest with only two or three or four members, but whenever we can get a chance we visit the public meetings in the neighboring counties of Adair and Barren and sometimes over in Allen, and frequently in Monroe.

My big cousin here has been active in the work. I sometimes wish I were as big as he is. I don't know whether he will ever be my size or not, but he is a man of lots of ability and he is doing wonderful work. I am so proud of him that I would like to tell you something about him. His work has been of wonderful influence even across the borderline.

Just a short time ago at the opening of our schools I forgot the date, and one of my neighbors said something about going down to the school. He said, "Are you going down?"

I said, "I didn't know it was the first day of school."

After he was gone I decided that I would go. I went, and after a while I was called on to make a little talk. I love the school people and I have given lots of my service for immunization against influenza, pneumonia, typhoid fever, diphtheria, scarlatina and so forth, and I thought at the conclusion of my remarks I would make a donation to the school, which has 125 children and a faculty of 6. I said, "If you will come to my office I will immunize the whole school against typhoid." I started that work the other day, and, friends, I am glad to do that and to cooperate with the people in the work. If we neglect keeping up the immunization in our county the infection may get started and spread to the borders at least. That is purely voluntary. I like to do my part of the work and do the best I can for a county medical agent; I think we have the promise of a mighty good man who will soon locate with us.

We have volunteered to call some meetings in the county. The last two times we had them at Sulphur Well, a health resort. The State Board has responded very nicely, and we have had five or six or seven of the State Board of Health with us. I believe Dr. McCormack has complimented us with his presence every time we have had a meeting over there; I think Dr. Hancock has done the same, and Dr. Barbour has met us there sometimes. Dr. Smith, the tuberculosis man, has been to see us, and several of the nurses. Dr. Lillian H. South I think has been there. They have shown a great interest in our work.

We have not had any malpractice suits. However, we had a threatened one last year, I believe.

### Monroe County

George W. Bushong, Tompkinsville: We are getting along nicely over in Monroe. We have about six men who do some practice. Two of them are very old, almost out of practice. We only have one man under forty years of age and two are over sixty. We haven't added any new ones this year and haven't lost any. If the paid-up membership is not what it should be, you can criticize me for it for I have been down on the job part of the year, but I promise you that I will have them come to time all right. I didn't ask for a report from the secretary and I didn't get one, but we are getting on nicely, we are doing fine, and our doctors are looking after the people on relief as best they can, because they would have to look after these families if there weren't any fee anyway. I have insisted that they go ahead and see to them and bridge over with the little bit of money they are getting, and possibly there will be a better day soon.

### Nelson County

A. D. Steely, Bardstown: Nelson County has fourteen doctors, ten of whom are members of the society. We have had only two meetings this year, the first a business meeting and the second an interesting symposium by several doctors from Louisville. We spent the whole day in this meeting, and at the end we felt that we had spent a very profitable day, and were grateful to the speakers as well as to our secretary for arranging such a splendid post-graduate course.

We have an active Woman's Auxiliary. They have regular monthly meetings, and their membership is steadily increasing.

### Owsley County

B. F. Tye, Sturgeon: The report from Owsley is sort of like our membership over there—it will be short. There are really three of us over there, but Dr. Gibson and myself are the only two active ones and we get along the best we can.

With regard to our meetings, we meet with our county health official. Our cooperation is 100 per cent. Our county health official is cooperating with us nicely and seems to stay in his place and is working hard.

### Pulaski County

E. M. Ewers, Somerset: The Pulaski County Medical Society has fifteen members who have paid dues for 1934; there are six other physicians residing in the county. One physician, not a member of the society, died this year.

We held seven meetings since January 1, 1934, and eight papers were read before these meetings. The program for the June meeting was sponsored by the Kentucky State Medical Association's Cancer Committee. Before an assembly of the physicians of Wayne, McCreary and Pulaski Counties, their wives, and all registered nurses practicing in these counties, who were invited to this meeting, Drs. Louis Frank and A. J. Miller spoke on "Cancer of the Uterus."

The Pulaski County Medical Society has been active in combating the practice of an unlicensed practitioner, Mr. T. S. Lorton of Eubank. The society has been able to obtain a court order restraining this man from practicing medicine. This order has been disregarded by this man. For violation he has been fined and sentenced to a short period in jail. The society is now getting necessary affidavits for prosecution during the next session of the court. The nice thing about it is they have almost surely got assurance that they will get him out, and when we do, those six physicians, who are not members now will join—three of them will anyway.

### Harrison County

W. B. Moore: Harrison County has about sixteen members. We had a new man come into the county in July. We have conducted our programs to some extent this year by having visitors come in from the outside.

### Whitley County

C. A. Moss, Williamsburg: Whitley County has no formal report to make, but I have four or five things I want to say. The relief question is very unsatisfactory there on account of so much red tape, and if I am in order at this time, I would like to make a motion that we condemn the relief set-up and the rules and fees in connection with the relief organization so far as they come in contact with the medical profession.

I would like also to say that we have had some trouble there with the health work in our section. We are opposed to an all-time health officer practicing medicine for remuneration.

There are a few laws that our society is interested in. Several states have those laws. One law that we are interested in is a lien law for our doctors and hospitals. The State of Nebraska has such a law, as have New Jersey and several others. It provides that when a man is injured and he later on receives a judgment, the physician has a lien on that judgment, and so also has the hospital.

The second law that our society is interested in is the so-called Glass Law. They have that in the State of Florida and in some other states. That law provides that ten-cent stores can't sell eye-glasses and that peddlers can't peddle them and mail order houses can't ship them into the community.

We also feel that the doctors ought to be on the same basis as the undertakers, who have a preferred lien for their claims when a patient dies; we feel that the physician ought to have a preferred claim for his doctor bill.

I would like to make a motion at this time that a proper committee in conjunction with the attorney of the Association draw up a law on those three things and submit it to the next legislature.

Chairman Morrison: Your first motion was to condemn the set-up of rules and fees in connection with the relief organization.

Is that seconded?

The motion was seconded and carried.

Chairman Morrison: Do I hear a second to the Doctor's motion to draft a law for lien on property, similar to the undertakers?

The motion was seconded by Virgil Kinnaird and carried.

President Martin resumed the Chair.

President Martin: Are there any other delegates who have not reported?

Next will be the report of the Delegate to the American Medical Association, Virgil Simpson.

Virgil Simpson, Louisville: Mr. President and Members of the House: Your Delegates to the House of Delegates of the American Medical Association submit the following report.

As to the membership of the American Medical Association, the Secretary reported 98,041 members as of April 1, 1934. During the year 1,537 died. A loss of 70 members from that of 1933 is recorded.

The roster shows 60,714 Fellows. This is a loss of 1,781, of which 780 died. During the year 1,669 Fellows resigned and 1,903 failed to pay their dues.

Kentucky has 2,867 physicians, 1,698 of whom are members of the State Association and 698 of these are Fellows of the A. M. A.

### Financial

The Treasurer reported as of December 31, 1933:

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|---|---|
| Reserve (Invested and uninvested) | $2,073,356.27 |
| Realty, buildings, equipment | 858,786.85 |
| Cash | 198,286.13 |
| Certificate of Deposit | 100,000.00 |
| Accounts and notes receivable | 220,096.26 |
| | 3,450,525.57 |
| Liabilities | 267,059.10 |
| Total Net Assets | 3,183,466.41 |

Of this amount $750,000 stands as a building reserve fund.

The income from investments was $77,402.83; the net operating income was $5,929.38. The payroll of the Association was $39, 211.85 less than 1932.

### The Journal

The Journal cost the Association $836,954.04 during the year. Its gross earnings were $1,375,337.99. Thus it earned a net of $538,383.95. It actually earned more than that, since 20 per cent depreciation was charged off furniture and certain other items, which appears excessive. A desk will last longer than five years. There was a decrease of 3,412 subscribers during the year. A total of 4,427,974 copies of the Journal were printed. Thirty-three per cent of Kentucky physicians receive the Journal.

### Special Journals

Only three of this group produced a net income, the others went in the red. These three were the Archives of Otolaryngology, the Archives of Ophthalmology and the Journal of Diseases of Children. In the aggregate, the special journals cost the Association above their income the sum of $10,471.56.

### The Quarterly Cumulative Index Medicus

This is now published by the Association entirely. A total of 1200 medical periodicals is indexed regularly. The loss on its publication was $44,759.78.

### Hygeia

This journal was printed at a loss of $30,127.54. This is the first year it has not earned a profit. Only 14,296 physicians in the United States subscribe for it. It should be on everyone's reception room table. This is one of the most commendable of the A. M. A.'s activities.

### The Package Library

Only 2,325 physicians availed themselves of this service. The periodic lending service which supplements the library service loaned 6,903 periodicals and furnished 5,000 requested bibliographic material.

### The Cooperative Medical Advertising Bureau

Few physicians know that such a bureau is maintained. Thirty-two state medical association journals are served through this bureau. The bureau secures advertisements for the state journals, collects the money and allocates each journal its share of the net profits. The operating costs of this bureau were $14,266.25 and $5,000 was distributed among the thirty-two journals. This service does not appear particularly worthwhile except that it may help to keep the standard of advertising in these journals a bit higher.

### The Directory

The 13th Edition should have been printed in 1933, but it only recently came off the press. It contains some 10,000 new names and over 70,000 changes of addresses. Physicians do move.

### The Council of Pharmacy and Chemistry

This Council's work has had a very healthful influence on manufacturing drug houses. It remains an astonishing fact that manufacturers who fail to have their wares approved can find plenty of physicians willing to buy or prescribe this rejected stuff. The Council publishes New and Non-Official Remedies, which contains a list of agents approved. My criticism of this book is that too many worthless or near-worthless drugs are accepted. Each new publication, as a consequence, omits quite a number of drugs listed in each preceding book. Too many agents of identical or near identical action are admitted.

The Council publishes three other books, Useful Drugs, Hospital Practice for Internes, and an Epitome of the U. S. P. and National Formulary, which have had some popularity.

### Medical Economics

The Bureau of Medical Economics spent $17,476.34 studying the current pressing problems facing the profession.

Contract practice alone required the study of 570 different plans. The ones exhibiting the most support were those dealing with group hospitalization. Hospital insurance schemes have many inherent weaknesses, and the Council recommended, and the House of Delegates approved, only a plan which applies to all the hospitals in a community and which therefore affords the patient free choice of hospital and physician. So long as a plan concerns only one hospital free choice of physician is not likely.

One of the outcroppings of the interest in medical economics was the appointment of a special committee in the House of Delegates to consider the policy of the A. M. A. touch-

ing health insurance. This committee, along with other things, suggested what has come to be called the Ten-Point Plan of the A. M. A. You will hear more of this from the Committee on Public Policy and Legislation and also in a paper to be read at the scientific session.

### Recognition of Gastro-Enterology as a Specialty

The Section on Gastro-Enterology presented a resolution providing for certification of this specialty by the Council on Medical Education and Hospitals. The House unanimously approved the recommendation of the Reference Committee on Medical Education that the request be granted. The Section on Gastro-Enterology of the A. M. A. has been in existence for some sixteen years and about 2,000 physicians limit their work to these fields. There would appear no reasonable objection to this action.

Another resolution providing for cooperation of the Section on Nervous and Mental Diseases with the American Psychiatric Association and the American Neurological Association in maintaining a Board of Psychiatry and Neurology for the purpose of certification of specialists in these branches was introduced and passed.

### The Publicity Activities of Clinics, Hospitals, Etc.

A resolution was passed unanimously which reads in part:

"Publicity by clinics, hospitals, sanitoriums * * * as to quality of work done implies unusual and exceptional ability and efficiency on the part of their professional staff and, therefore, is advertising of the medical men concerned. This type of advertising distinctly savors of quackery and is unethical."

This is in reality a reaffirmation of an action of the House of Delegates in 1924. If no more effective than the 1924 action has proven, this present pronouncement was a waste of time.

### Federal Hospital Activities

A resolution protesting against extension of medical care in federal institutions to persons not entitled thereto was passed. This was particularly applicable to the District of Columbia, where every employee in the service of the Government may, and most of them do, obtain free medical care from medical men in the Army, Navy or Public Health Service. The principle, however, touches every community. Not only do federal employees seek free care, but the tendency is growing among county, city and state employees as well. In this state an Adjutant General, as well as a Governor, have received medical service in tax-supported institutions.

### Liability Insurance

There is an alarming rate of growth of malpractice suits. Many lawyers encourage the institution of such suits by accepting employment as counsel on a basis of percentage of liability recovered. As a result of this easy means of securing legal representation, together with the economic urge of the past four years, there has been an unprecedented increase in such suits. One of the sequences of this condition has been a tremendous increase in the number of physicians buying protection from companies formed to cover such business. This tendency has been furthered by these companies through salesmanship, advertising, etc. The plans that were the outcome of these conditions appeared satisfactory to the physicians buying them.

More recently, however, these companies have adopted a policy which materially increases their liability for court awards without materially reducing the annual premium. They argue that high protection figures encourage suits and that the doctor should not carry a large protection policy. They even urge that he should put his personal resources in a legal form that would not be liable in the event he were sued and lost. Carried to its logical conclusion it would mean that every doctor should hide his assets, carry on his business on a shoe-string and let his creditors worry.

If a doctor be sued, is guilty, loses his suit, the damages assessed by the jury becomes a debt as much as his office rent. Again, it does not appear that a jury's judgment of guilt would be determined by the wealth or poverty of the defendant doctor. Is the suit just or unjust should be the question.

That this is a national problem is evidenced by the fact that a resolution was introduced into the House of Delegates providing for a consideration of the A. M. A. setting up such an activity. This was referred to the Board of Trustees, which reported back that the Board had appointed a committee to study the matter and would report its conclusions at the next meeting.

There are a number of angles to such an undertaking, but it is recommended that the House of Delegates of Kentucky consider it and advise its delegates to the A. M. A. in 1935 what it wants done.

### Radio Advertising

Resolutions were introduced by delegates from both Illinois and New York pertaining to the use of broadcasting systems in the exploitation of drugs and remedies of various sorts. These were referred to the Committee on Hygiene and Public Health, which condensed them into a resolution stating "that the A. M. A. is opposed to the advertising,

recommending or in any way exploiting over the radio any preparations, remedies or appliances for the treatment of human ailments, * * * that it favors a central national clearing bureau of the medical profession which shall act as a reference committee to confer and advise with broadcasting systems as to the propriety of accepting commercial programs advertising such preparations; * * * and that it protest to the Federal Radio Commission and to broadcasting stations against misleading and unwarranted adversing." This was unanimously passed by the House of Delegates. It is to be hoped that something may be accomplished by this action. The flagrantly misleading claims made for drugs and patent medicines over the radio during the past few years is even more perniciously harmful, as well as disgusting than the unblushing misleading statements so common a few years ago in newspapers and almanacs.

### Reapportionment of Delegates from the State Associations

The apportionment of delegates from the various state associations to the House of Delegates of the A. M. A. is fixed on the basis of one delegate for each 800 members or fraction thereof, with the further proviso that each state association is entitled to one delegate regardless of the number of its membership.

The By-Laws of the A. M. A. provide that the total membership of the House of Delegates shall not exceed 175, and further that reapportionment shall be made based on membership every three years.

The Reference Committee recommended and the House of Delegates approved that "the apportionment of delegates for the next three years be made on the basis of one delegate to each 775 members or fraction thereof." On this basis of apportionment the membership of the next House of Delegates will be 172. This is one less than the membership of the present House, and on this basis Pennsylvania and Texas each gain one delegate, while Alabama, Illinois and North Carolina each lose one. The delegates to which Kentucky is entitled under the new apportionment remain three, as at present.

### Contract Practice

The Chairman of the Judicial Council, Dr. Follansbee, proposed the following amendment to the Principles of Medical Ethics, which were referred to the Reference Committee on Amendments to the Constitution and By-Laws, favorably reported to the House of Delegates by that Committee and unanimously passed.

"By the term 'contract practice' as applied to medicine is meant the carrying out of an agreement between a physician or a group of physicians, as principles or agents, and a corporation, organization or individual, to furnish partial or full medical services to a group or class of individuals for a definite sum or a fixed rate per capita.

"Contract practice per se is not unethical. However, certain features or conditions if present make a contract unethical, among which are: (1) When there is solicitation of patients, directly or indirectly; (2) When there is underbidding to secure the contract; (3) When the compensation is inadequate to assure good medical service; (4) When there is interference with reasonable competition in a community; (5) When free choice of a physician is prevented; (6) When the conditions of employment make it impossible to render adequate service to the patients; (7) When the contract because of any of its provisions or practical results is contrary to sound public policy.

"Each contract should be considered on its own merits and in the light of surrounding conditions. Judgment should not be obscured by immediate, temporary or local results. The decision as to its ethical or unethical nature must be based on the ultimate effect for good or ill on the people as a whole."

### Officers

The following officers were elected:

James S. McLester, Alabama, President Elect.

George G. Reinle, California, Vice President.

Olin West, Illinois, Secretary.

Herman L. Kretschmer, Illinois, Treasurer.

F. C. Warnshuis, Michigan, Speaker of the House of Delegates.

Nathan B. Van Etten, New York, Vice Speaker.

Roger I. Lee, Massachusetts, Trustee

Allen H. Bunce, Georgia, Trustee.

### Place of Meeting 1935

Atlantic City, New Jersey.

Secretary McCormack: I move that the request for instructions to the delegates in regard to malpractice insurance be referred to the Council for a report.

The motion was seconded and carried.

Secretary McCormack: Mr. President, two of our ex-Presidents, Dr. P. H. Stewart, of Paducah, and Dr. J. T. Reddick, of Paducah, have informed me that they are unable to be present on account of ill health. In Dr. Stewart's case his ill health is extremely serious, and I would like to move you, sir, that the President and Secretary be authorized to send a telegram to each of these members expressing our regret at their

inability to be present and our hope for their speedy recovery.

The motion was seconded by Irvin Abell and carried.

SECRETARY MCCORMACK: I move that we recess until seven o'clock.

The motion was seconded and carried, and the meeting recessed at five forty p. m., until seven p. m.

## SECOND SESSION

MONDAY EVENING, OCTOBER 1, 1934

The second session of the House of Delegates convened at 7:30 p. m., President Martin presiding.

PRESIDENT MARTIN: The house will please come to order. We will have the report of the Committee on Public Relations, by Irvin Abell.

### REPORT OF COMMITTEE ON PUBLIC RELATIONS

IRVIN ABELL, Louisville: Mr. President and Members of the House of Delegates: While no specific matter has been referred to your committee during the past year, it felt it to be both interesting and informative to report briefly upon the transactions of the House of Delegates of the American Medical Association at the meeting held in Cleveland, June 11-15, 1934, pertaining to the economic situation which confronts organized medicine. One could not but be impressed by the sincerity of purpose and earnest spirit of the officers of the association and the members of the House of Delegates representing the organized medical profession of the United States in a most apparent determination to safeguard the interests of medicine and to promote public welfare. The Chairman of the Board of Trustees reviewed briefly the action of the House of Delegates during the past eighteen years in evidence of the sincere and deep concern of the American Medical Association regarding all social programs affecting the delivery of medical service.

Among the points stressed by him may be mentioned the following: As early as 1916 the House of Delegates requested the Board of Trustees to undertake an investigation of social insurance in all its forms and to make suitable report to the House. The subject has been raised from time to time since that date. On every occasion on which the House of Delegates has officially considered the questions of compulsory health insurance and social insurance, as well as the entrance of the state into medical practice, it has reaffirmed the independence of medicine as a profession and it has always condemned any system whereby the state would enter into the practice of medicine.

In 1920 following the report of the committee appointed to study compulsory health insurance, the House of Delegates adopted a resolution strongly condemning all forms of compulsory health insurance. It directed attention to the observation that voluntary insurance has always been the forerunner of compulsory, a fact that the most ardent advocates of voluntary insurance admit. He recalled the action of the House of Delegates in 1921 approving and endorsing all activities and policies of the states directed to the prevention of disease but opposing the state treatment of disease, except for the delinquent and defective. Again in 1922 the Association declared its opposition to all forms of state medicine because of the harm that would come thereby to the public weal; last year the House of Delegates unanimously approved in principle the Minority Report of the Committee on the Cost of Medical Care and urged the dissemination of this point of view both among the profession and the public, with a view to the maintenance of high ethical standards and the preservation of professional ideals.

It was noted that there are manifestations of unrest in relationship to the economic situation among some of the component and constitutent bodies of the American Medical Association, and affirmed that the Board of Trustees, the executives and the publications of the Association had done their utmost to carry out the policies established by the House of Delegates.

He referred to the establishment of the Bureau of Medical Economics in 1930 and called attention to the importance of the bulletins issued by the Bureau not only for the factual data which they present, but also for the interpretation of medical economic trends, stressing in particular one entitled Sickness Insurance Problems in the United States, which includes a presentation of twelve basic principles for the guidance of the profession.

He reported further that today we are confronted with an extraordinary situation of the utmost importance to the health and welfare of the American people and to the American medical profession. It is no secret that a considerable number of foreign nations have already established state systems of medical care and that an intensive campaign has been carried on in this country for many years, led by philanthropists, social workers, economists and various foundations, to cause the American medical profession and the American people to accept a similar type of medical practice.

In accordance with the mandate of the House of Delegates, all the facilities of the

American Medical Association have been used to oppose this trend and the propaganda in support of it, which has been widely circulated and for which vast sums of money have been and are being expended by various interested parties. It is also well known that the President of the United States, in a recent message, has come forth for the principle of social insurance, with special reference to old age pensions and unemployment insurance.

Following the remarks of the President of the Board of Trustees the Special Committee of the House of Delegates made its report. It did not recommend any plan of action, but abstracted from the bulletin of the Bureau of Medical Economics entitled Sickness Insurance Problems in the United States, the following principles, with the suggestion that they be followed by all constituent bodies of the American Medical Association as bases for the conduct of any social experiments that may be contemplated by them:

First: All features of medical service in any method of medical practice should be under the control of the medical profession. No other body or individual is legally or educationally equipped to exercise such control.

Second: No third party must be permitted to come between the patient and his physician in any medical relation. All responsibility for the character of medical service must be borne by the profession.

Third: Patients must have absolute freedom to choose a legally qualified doctor of medicine who will serve them from among all those qualified to practice and who are willing to give service.

Fourth: The method of giving the service must retain a permanent, confidential relation between the patient and a family physician. This relation must be the fundamental and dominating feature of any system.

Fifth: All medical phases of all institutions involved in the medical service should be under professional control, it being understood that hospital service and medical service should be considered separately. These institutions are but expansions of the equipment of the physician. He is the only one whom the laws of all nations recognize as competent to use them in the delivery of service. The medical profession alone can determine the adequacy and character of such institutions. Their value depends on their operation according to medical standards.

By way of digression may I state that both the American Hospital Association and the Catholic Hospital Association which have held meetings since this Ten-Point Policy Program was adopted have very heartily commended the report and accepted it in its entirety.

Sixth: However the cost of medical service may be distributed, the immediate cost should be borne by the patient if able to pay at the time the service is rendered.

Seventh: Medical service must have no connection with any cash benefits.

Eighth: Any form of medical service should include within its scope all legally qualified doctors of medicine of the locality covered by its operation who wish to give service under the conditions established.

Ninth: Systems for the relief of low income classes should be limited strictly to those below the "comfort level" standard of incomes.

Tenth: There should be no restrictions on treatment or prescribing not formulated and enforced by the organized medical profession.

It is very evident that this represents a definite and constructive improvement in policy, and it would seem at least to have clarified the situation in so far as the distribution of medical service is concerned by any of the routes other than those which time and experience have proved to operate in the best interest both of the public and of the profession.

Fortunately, in Kentucky we have had none of the trying problems which have arisen in other portions of the United States.

Dr. McCormack mentioned the only two we have had so far, the unfair restrictions of the compensation board and the inadequate pay which is given by the Federal Relief Administration. These are but indices of what would generally obtain if socialization of medicine ever became an established fact.

It is an odd thing that while we have been practically free of the objectionable features of contract practice, there have been more than 500 such plans carried out in other parts of the country, notably in Alabama, in Arkansas, in California, in Washington, and in Oregon. In fact, it almost threatened to disrupt the entire organization of Washington and Oregon by many of the schemes of contract practice which certainly were not organized with an outlook to the social and economic welfare of the people whom they serve, but were largely as the result of the economic ambition either of individuals or of organizations who wished to profit by it.

It would seem at least that eternal vigilance on the part of organized medicine,

with such a program as this which gives you definite policies that will guide you along the narrow path, would at least give a line of safety to follow in the future.

If it is determined in a community that some experiment to change or improve the method of administering medical service is desirable, observance of these principles will remove many of the disturbing influences from such an experiment. In all such experiments, attention must be sharply focused on the quality of medical service.

Such restrictions will undoubtedly lower the enthusiasm of many of the present advocates of such schemes. They remove the interest of the politician, the commercial promoter and all those who consciously or unconsciously are seeking to achieve other objectives than better medical care for those unable to provide such care for themselves under present conditions. All these principles are directed toward protecting the character of the service to be given and all are directly designed to guard against abuses which experience shows are bound to arise when these principles are neglected. In most communities it will be found that comparatively few changes in the methods of administering medical care will be necessary. That type of medical practice which preserves the personal relationship between physician and patient, that maintains the practice of medicine as a profession, and that has withstood the test of centuries must be preserved for the best interests of both the public and the medical profession.

The report of the committee was adopted section by section and as a whole on motions of Dr. Van Etten, duly seconded and carried, with the substitution of the words "legally qualified Doctor of Medicine" for the word "physician."

PRESIDENT MARTIN: Is there a motion for the adoption of this report?

S. C. SMITH, Ashland: I move its adoption.

The motion was seconded and carried unanimously.

PRESIDENT MARTIN: The next speaker will be introduced by our Secretary.

SECRETARY MCCORMACK: Mr. President Ladies and Gentlemen: It is a distinct privilege to present to this organization the representative of the American Medical Association who has come here, at the special invitation of the Council, to address us on this particular subject. The Director of the Bureau of Medical Economics of the American Medical Association is probably the best qualified man in the world today to discuss these problems. He has in his office the best collection of literature on the subject of health insurance and social medicine that has been collected anywhere in the world. He is thoroughly familiar with the subject, and it is a distinct privilege to present to the House of Delegates of the Kentucky State Medical Association our guest, Dr. R. G. Leland of Chicago. (Applause)

R. G. LELAND, Chicago: Mr. President, Mr. Secretary, Members of the House of Delegates of the Kentucky State Medical Association: I am grateful to have been invited here as our guest for the purpose of discussing with you some of the important questions before the medical profession today.

This is a time in the history of medicine that is perhaps the most important of all recent times. Those of you who heard Dr. Smith's speech at the League of Christian Physicians last night heard him speak of the ignorance that had surrounded medicine and had interfered with the progress and with the safety and health of peoples from time immemorial. In addition to the ignorance which has surrounded medicine in the forms of superstitions, prejudices, and what-not, there are other things which are inimical to the public good, such as the passage of certain laws, and the establishment of certain institutions. Some of these I shall refer to later.

One of the most important of all the activities in this country today is an insidious but nevertheless a very persistent effort on the part of lay organizations (and I am sorry to say of a certain number of physicians) to advance the theory and the practice of the socialization of medicine. They refer to the British system of health insurance as one example of the way in which medicine ought to be practiced.

The United States has frequently followed Great Britian in forms of social insurance. We followed the lead of Great Britian in the adoption of poor laws, in the adoption of workmen's compensation, and in various forms of labor control and industry regulation, and now many people are urging upon us that the adoption of the English system of health insurance is the next step which we ought to take.

These people who have seen and perhaps studied somewhat the English system claim that it is the system which has answered all of the objections, which has shown the remedy for all of the ills to which medicine may be heir, and that now it is the system which the medical profession in the United States ought to adopt.

Much light may be thrown on the operation of the British system of health insurance if we examine, somewhat briefly, per-

haps, a sketch of the origin and the forces responsible for the creation of health insurance in Great Britain and the objectives which it was supposed to have accomplished.

In 1909 a Royal Commission was appointed to study the English poor laws. This Commission made a report and in it focused attention especially on poverty and all means for its relief. This Commission was especially elaborate in its discussion of proposals for medical relief for the poor. They also proposed great extension of the public health service and laid special emphasis on preventive measures, both medical and social.

It is significant that this Commission contained many of the ablest minds in all shades of opinion concerning the social and the medical problems of the day. At that time the Labor Party in Great Britain was growing in strength and threatened the strength of the Liberals. This Labor Party was demanding relief for the poor and it supported many of the measures which were represented and recommended by this Poor Commission which made its report in 1909.

At about this stage Lloyd George introduced his health insurance measure, and he himself, in speaking of the proposals for health insurance on the twenty-fifth anniversary of its adoption as a law, said that nobody wanted such a law and that it was opposed by nearly everyone concerned. This is not exactly accurate. There was one body of people who did want the health insurance law, and they knew why they wanted it; that was the body of Liberal politicians, led by Lloyd George, who saw how such a law could sidetrack the recommendations of the Poor Law Commission and take away some of the most valuable political assets of the Liberal Party.

He succeeded, as a skillful politician must, to secure the support of many powerful political forces. He promised labor ninepence in benefits for fourpence in contributions.

At first a death benefit was included, but when the powerful commercial insurance companies threatened to put all of their insurance solicitors into the field as election agents unless that provision was withdrawn, it was promptly withdrawn. At first the medical profession was entirely disregarded, and then the British Medical Association found it necessary to enter the field and spend $150,000 to force some modifications in the law, and these modifications it is now admitted are responsible for the features of the law of which its defenders are most proud, that is the British Medical Association.

The arguments in support of this law were adopted to meet the alignment of forces just described, namely, two political forces, the Labor Party and the Liberals. Great emphasis was laid on the preventive features of the law. It was a very clever move to call this a health insurance law. In the European countries for a number of years prior to that time, laws had been enacted which were called sickness insurance laws; special clauses were inserted which provided that kind of punishment could be meted out to industries which had a larger amount of accidents than was considered normal.

Conditions in medical practice led the physicians to look upon almost any change as an improvement over that which they were experiencing at that time.

A few years earlier the London Lancet had published a series of articles on the subject, "The Battle of the Clubs." These clubs had been so highly competitive that many physicians had been reduced almost to starvation because of the high competition in the service to these various clubs. Contract practice of all kinds was flourishing and the British Medical Association about that time published an article as the report of an investigation disclosing the mass of evils which surrounded contract practice in Great Britain. Contract practice which existed at that time in Great Britain was very similar to the kind of contract practice about which you have heard so much in this country for so many years and about which the Judicial Council has done so much work. At the last session of the House of Delegates, of the American Medical Association, in Cleveland, an amendment to the Principles of Ethics was adopted which clarifies to some extent that situation.

The advocates of health insurance promised that health insurance would abolish clubs and contract practice. Such were the conditions at the beginning of health insurance in Great Britain.

Realizing the tendency to follow Great Britain in social legislation, and maintaining an awareness of the activities of many persons, individuals, organizations and now even political influence to secure enactment of social legislation in the United States, it is important to examine the record of the English health insurance systems and, if possible, to see to what extent this measure attained its objectives when it was tried.

Even its best friends admit that the British system has failed almost entirely with respect to the preventive measures which it promised. It has brought no increase in gen-

eral health examinations, in immunization, or in similar preventive measures, and very little is found in the record of the early detection of disease in its incipiency. It has been equally defective in bringing medical relief to the indigent. The expenditures for this purpose have increased continuously and within the last two years the most extensive measures in this direction ever proposed in England have been put into operation for the relief of the indigent. Contract practice and clubs have been revived and have developed almost all of the abuses that existed prior to health insurance. Indeed, the representatives of public health and preventive medicine are frank to say, and I quote here, "With regard to medical benefit under the Act it was frankly a perpetuation of club practice on a vast scale."

Morbidity among the insured has constantly increased under health insurance. The morbidity rate now is about twice that which existed at the time insurance began. In Germany, where insurance has existed for about fifty years, the morbidity rate of the insured is about three times that which is experienced by those not under insurance.

The plan was not found capable of universal application, as evidenced by the fact that the Highlands and Islands Service had to be organized for the northern part of Scotland, and it was not applicable to the sparsely settled districts. Yet we of the United States are urged to adopt this form or a similar form of medical practice in a country where states are as large as England, Wales and Scotland combined, and where conditions are equally diverse as in those countries.

We should inquire into the benefits that have been ascribed to insurance in England. It would be as foolish to say that there have been no gains as to state that there have been no defects. Perhaps the most frequently quoted list of accomplishments are those which were submitted by the British Medical Association to the Royal Commission on National Health Insurance; I quote,

"Large numbers, indeed whole classes, of persons are now receiving a real medical service which they formerly did not receive at all. The number of practitioners in proportion to the population in densely populated areas has increased. The amount and character of the medical attention given is superior to that formerly given in the best of the old clubs, and immensely superior to that given in a great majority of clubs. Illness is now coming under skilled observation and treatment at an earlier stage than was formerly the case. Generally speaking the work of practitioners has been given a bias toward prevention which was formerly not so marked. Clinical records have been or are being provided which may be made of great service in relation to medical research and public health. Cooperaton among practitioners is being encouraged to an increasing degree. There is now more marked recognition than formerly of the corrective responsibility of the profession to the community in respect to all health matters."

When compared with the average level of medical practice in England prior to the adoption of health insurance, the above list of achievements represents a decided improvement. Such a comparison of course is the only fair method. It is unfair to compare the condition of medical practice in England with that in Germany or France or Scandinavian countries or even the United States. We should compare that in England prior to insurance with the condition in England after insurance. Such comparisons as can be made of the conditions in Great Britain with those in the United States can be in only the most general and broad terms.

It is believed that the following comments are justifiable. The question is immediately raised concerning "Large numbers, indeed whole classes, of persons are now receiving a real medical service which they formerly did not receive at all." The condition of not receiving medical care is one which does not obtain in the United States today.

There is at least some question as to whether there is any gain in increasing the number of practitioners in the densely populated areas. One of the arguments that is being used here in the United States for insurance is the fact that the services are too closely concentrated in the densely populated areas.

The old service club, all observers agree, was just about as bad in England as it could be. Physicians were giving serviees for a penny a week. Others were known as sixpenny doctors, meaning that they received approximately twelve cents for every medical act, that is whether it be a diagnosis or treatment or a minor operation.

It is undoubtedy true that some disease is coming under skilled observation and treatment earlier than it formerly did. If we are to believe what seem to be creditable witnesses, little is done about that illness except to observe it. There is continuous criticism that incipient diseases are not being detected, and that sort of diagnosis which is given in many of the panel practices is merely a casual observation of incipient disease and nothing is done about it until that disease

becomes much more advanced, sometimes beyond the hope of repair.

It is not easy to determine what is meant by the bias toward prevention, because it is difficult to determine to what extent there was a bias toward prevention during the pre-insurance period.

The accumulation of records and clinical data which are to be of service in research and in public health work is probably little more than a pious wish, because practically all of the records that are being accumulated today are for the purpose of adjusting the claims of the insured.

The morbidity statistics are so distorted by the influence of certification of cash payments that they are no longer any accurate measure of pathology. Morbidity statistics in many places are nothing more than economic measures of disease and are not pathologic measures. They are measures of the number of days, or the number of hours that men or women or children are away from work or school. No pathologic reason for their absence from work or school is stated, the record shows merely the number of days' absence.

Parenthetically I should like to say here that one of the studies of the Committee on the Costs of Medical Care used an economic instead of a pathologic definition of disease. Such studies of the incidence of disease in this country and the measure of the medical services that ought to be available for the correction of these disorders are in our opinion, based on an entirely erroneous premise, namely, an economic rather than a pathologic definition of disease.

In regard to all these claims, for favorable developments in Great Britain as a result of health insurance, the question may be raised as to what extent insurance is actually responsible for the more desirable of these changes. The desirable developments listed by the British Medical Association in its report have taken place in the United States since 1913 without the influence and without the intervention of insurance. Certainly even these claims would indicate that insurance has not gone far in solving the pressing problems of medical care. It did not bring any significant contribution to preventive medicine. It has aggravated the overloading of hospitals and has forced upon them the problems of administration and financial support as pressing even as those that have fallen upon the hospitals of the United States since 1930. It has failed so completely to meet the demand for general medical care that the British Medical Association is today as actively engaged in trying to find new plans and methods of advance as is the organized medical profession in the United States. This is shown by "The General Plan for Medical Care of the British People," a pamphlet which many of you may have seen and other plans which may have been developed for the provision of specialization, especially in the London area.

The outstanding fact— is that insurance has removed the possibility in Great Britain of a choice among the ways of meeting medical problems. They have but one course to follow; that course is insurance, and other methods of meeting medical problems have been closed to them. The law is on the books and they must follow that law.

If we are to judge by the plans proposed by the British Medical Association and the public, there is recognition if not acceptance of the inevitability but not yet of the desirability of the complete socialization of medicine in Great Britain.

This situation may offer an explanation of the statements that all representatives of organized medicine in Great Britain are favorable to insurance. Provision is made whereby physicians in Great Britain are allowed to vote or express their willingness to serve under the insurance law. As yet only 44 per cent of the British medical profession have signified their willingness to act in panels for insurance practice. Presumably, then, 56 per cent are not entirely agreed that health insurance is the best way to practice medicine.

Furthermore, of 44 per cent who have signified their desire to act as panel practitioners, there are many who still primarily depend upon private practice, but who only enter their names upon the panel because of local situations, thereby actually reducing the percentage that are presumably entirely in accord with and in support of panel practice or health insurance in Great Britain.

Much is made of the claim that health insurance has increased the income of British physicians. It has undoubtedly raised the income of many physicians from a starvation to a subsistance level. The average income of a panel physician from insurance is about $2000 annually. Of this amount he must spend about $1000 for the maintenance of his practice. This does not indicate a very high level of payment, even though we remember that panel practice is often incidental.

The real reason why organized medicine in Great Britain and the great percentage of the population now express more or less approval of insurance is because it is now an accomplished fact and it has been for more than twenty years.

Apparently there is no movement in Great Britain or England to abolish insurance. Such an act would be futile. The nation has now progressed too far along this road. There is no turning back in Great Britain.

The United States is now where Great Britain stood in 1911. It is in a far more favorable position to choose which road it shall follow. It has developed methods of meeting the problems of medical care that are far in advance of those existing in England at the time health insurance was proposed and adopted. This, then, is the really important although hypothetical question. If England were back in 1911 in the situation which now exists in the United States, would England choose the road of insurance?

On this point I should like to quote a portion of a recent address of Sir Henry Brackenbury which perhaps many of you have seen, perhaps you studied the entire address. You have seen it quoted in the Bulletin, I know, and perhaps elsewhere. He began a recent address on "What is Wrong with National Health Insurance" with these sentences: "By this address I want to be provocative of thought. My title is not a statement but a question, and though relative brevity must almost always lead to some appearance of dogmatism, I do not want to be dogmatic but interrogatory. First I want to recall two passages from the memorandum of evidence submitted on behalf of the British Medical Association to the Royal Commission on National Health Insurance. 'The measure of success which has attended the experiment of providing medical benefit under the National Health Insurance Act system has been sufficient to justify the profession in uniting to insure the continuance and improvement of an insurance system. The organization of a national health insurance scheme is not necessarily or even probably the best means of utilizing limited resources for the promotion of national health. It is more likely that there are a number of other directions in which severally or collectively the corresponding expenditure would produce an even more satisfactory return.'

"Those statements were made more than eight years ago. There can be no doubt, however, that contradictory as some may think them, they are both regarded as true by the great majority of the medical profession today."

There is no question but that Sir Henry Brackenbury approves of health insurance. No one disputes his position on that matter. In his opinion the organization of a national health insurance scheme is not necessarily or even probably the best means of utilizing limited resources for the promotion of national health.

In twenty-one years the British Health Insurance system has cost in operation about $2,000,000,000. If we are to enter upon a system of health insurance involving the spending of a much larger sum, is it not well to consider some other directions in which the expenditure of such a large sum might produce even more satisfactory returns?

That the British Medical Association recognizes that in many ways the existence of a national health insurance system has rendered more difficult the problem of organizing all medical facilities is shown in the memorandum of evidence of the Association's Scottish Committee on the Scottish Health Insurance Services. This appears in the supplement to the British Medical Journal of July 7, 1934, page 15, paragraph 164.

In other words; it is evidently still a debatable question whether if it were possible it would be desirable to scrap the whole of the existing machinery in England and proceed to build on a new foundation.

Sensing the opportunity to make some changes in the methods of administering medical care to all classes of population without following European patterns, a number of communities throughout the United States have made efforts to apply common sense methods of correcting some of the matter of giving medical service and have placed in operation plans which are worthy of some notice. I shall not tire you with giving you all the details of these plans, which can be found in a number of places, but I shall give you only briefly three of these plans.

One is in Alameda County, California, where a cooperative plan by the medical association and the County Institutions Commission was established in October, 1932. The members of the medical association agreed to treat non-indigent patients privately for whatever fee they could afford to pay. The social service department of the County Institutions Commission is responsible for social service study, for medical social case work, and for determining the patient's ability to pay for medical care. The physician makes at least one visit without any regard to the patient's ability to pay, and he then fills out a card giving certain social information. He then sends this card to the social service department which notifies the local clinic if a social investigator is requested by the physician.

During 1933, 2,077 references to private physicians were made by social workers,

clerks, doctors and others in the Alameda County agencies.

One of the significant parts of the report of this plan is, that there were 1,812 out of 1,898 patients who paid part fees; 56 paid full fees. This would seem to indicate that there is a class in the population of most every community that is not shopping around for free service but perhaps doesn't know just how to go about it to get the proper medical care.

In San Diego the Central Clinic Service originated with a suggestion from the Health Council of the Community Chest. There is an arrangement whereby patients who need medical care and who are not altogether indigent or who are not able to pay the full fees are given a social service investigation and are allowed to pay whatever they can. Five hundred and forty-one, or 40 per cent, of the patients in 1933 were referred for this social service investigation by physicians themselves; 20 per cent of the patients sent to physicians were sent at a full fee rate, showing again that all these patients who are looking around for medical care are not bargain hunters.

One of the most recent, perhaps the most extensive and one of the most unique, is a plan which was adopted not long ago in Detroit. A complete medical service plan without the use of insurance is offered to the wage earners of Detroit through a plan developed and put into operation by the Wayne County Medical Society. The physicians of the Wayne County Medical Society take care of three classes of patients: the unemployed on welfare rolls receive home and office medical service by the family physician, or dentist, through the Medical-Dental Bureau, operated by the Wayne County Medical Society; the unemployed not on welfare rolls are cared for in Detroit through the Medical Relief Committee of the Wayne County Medical Society; the employed persons earning small wages or salaries are cared for by the Bureau developed from the Wayne County Medical Society plan.

This plan involves two things. An estimate is made of the patient's ability to pay and then the patient is given time in which to pay for the medical care received. A branch of the Wayne County Medical Society acts as the collection agency for those people, thereby saving them a sickness financing cost which many commercial concerns are making to physicians and to patients on sickness financing schemes, developed and operated commercially and sometimes adding as much as three per cent to six per cent per month to the patient's bill.

These, then, are three out of a large number of plans that are being operated in the United States without the insurance principle, and the medical profession in the United States ought to distinguish very carefully between these plans and health insurance. We can still choose between such plans developed and operated by the medical profession and sickness insurance.

We can still choose which road we will take, but having chosen it we must follow it. After the choice is made and the institutions are established, institutions which always and invariably follow in the wake of insurance laws, vested interests are created and political forces are set in motion. It is then extremely difficult if not impossible to reverse the direction of this movement. We must face the fact that if we enter upon this road there is little if any reason to believe that we can avoid the evils of insurance and take only the good of health insurance.

If we decide to take the other road, to continue the practice of medical principles which have proved their value throughout so many centuries, and to develop into an organized whole all the resources of private and institutional medical facilities and public and preventive medicine, we will have before us all the possibilities of a flexible growth and development which are closed to us if we enter the closely walled road of health insurance.

The choice of a road in England over which to carry medical service was not alone for the convenience or the desires of the politicians; it wasn't for the magnanimous impulses of employers or friendly societies that were to carry the insurance; the choice did not involve solely the interests of the medical profession. At the end of twenty-one years that road has become the avenue through which more than 17,000,000 people are supposed to get their medical services. If the medical profession of the United States intends to hold steadfast to its resolution to maintain for its prime objective the service it can render to humanity, it cannot choose a road for itself alone, the road it chooses over which to carry medical care to humanity must be traveled by human individuals as well as by the medical profession. This road, then, should be sufficiently wide and open to serve the best interests of those for whom it was built, the people and their physicians.

I believe the reason for bringing you this message tonight lies in the fact that we have before us now evidence that something is going to be done in the next few months to

enact state sickness insurance laws. A few years ago, within the memory of many of those here, laws for the benefit of the workmen were proposed, and workmen's compensation laws were passed throughout these United States without much consultation with the medical profession. You who are practicing medicine know better than anyone else how those laws have operated. They have undergone constant change, rules and regulations have been added, and the medical fees which are charged under workmen's compensation are little more than half the regular fees, now we are conscious of the fact that the Federal Government itself is studying social insurance, old age insurance, unemployment insurance, and we hear in round-about ways that health insurance is also to be considered.

We know that a private organization known as the American Association for Social Security has already drafted a bill on sickness insurance, that it proposes to place this bill before as many state legislatures as possible during the coming sessions of those legislatures.

We know that these influences are at work.

There is one thing that can be done, one thing that is essential, and I refer again to Dr. Smith's address when he quoted from the Scriptures in his reference to the truth making us free. We as physicians must see to it that every physician who is interested in the practice of medicine shall become at least intelligently conversant with all these things which threaten the institution of medicine today. We must be able to speak intelligently about medical economic problems and especially about sickness insurance, state medicine, and other social legislation. It may have been suggested to you that it may be necessary for us to do some bargaining in the way of a compromise, of one kind or another in our efforts to preserve the best in medicine.

There may be others who think and declare that State Medicine or sickness insurance is inevitable. Let us not sell ourselves out by inflicting on ourselves a false psychology. Physicians must cling to the principle that the institution of medicine must be preserved. Let us not compromise, because a compromise always means a sacrifice of principle.

I would rather, personally, meet defeat standing solidly for the principles of medicine as an institution than to compromise on any kind of a basis and thereby sacrifice those principles. (Applause)

SECRETARY MCCORMACK: Mr. President and Gentlemen of the House: Before moving to express the gratitude that I know we all feel to Dr. Leland for this splendid address, I want to say just two or three things that I think are of importance to us as representatives of the profession in Kentucky.

I know it comes as somewhat of a shock to many of us even to think, in spite of all we have read and all we have seen, that there is impending such a revolutionary movement as is involved in the suggested socialization of medicine; and yet, we are standing tonight right on the brink of the thing. Within a couple of weeks at Berea the State Conference of Social Workers will hold its annual session. I have been president of that organization three or four times and have tried to keep in touch with its activities. At this session there will be a very large group of those who have recently been inducted into social service under the guise of relief operators in the various county relief organizations. They are under careful and active leadership. Mr. Frank Bane, probably the most ingratiating and intelligent of all the leaders in this socialization movement, is to deliver the annual address at this meeting.

I hope very much that a great many physicians will be present at the meeting and take part in its deliberations. We are calling a conference of the forty health departments in Eastern Kentucky, nurses, sanitary inspectors and health officers during that conference, so that they will at least be informed on these subjects, and I hope as many of you as possible will be at Berea for those meetings.

This is a situation which actually confronts us. It is being promoted in Kentucky, little as we think, and it is being promoted by a group that would exploit us, just as we have been exploited in those sections where we have already known of the activity of the relief organization. The situation that confronts us is serious, one that requires our best thought. It is not going to do any good if we are going to operate alone, but we can control the situation if all of the organizations that compose the American Medical Association are intelligently informed about this movement.

I have written, in the last few days, to attempt to get enough copies of the report of the Executive Board of the Milbank Fund to furnish to all of you, copies which will show you just exactly how insidious this whole thing is, how well it is being prepared, how appealing it is to those who know nothing about it. It has been sugar-coated so carefully that almost anybody would swallow the pill and not think there was anything inside the sugar. It is important,

I think, for the members of the profession to be intelligently aware of the thing.

Get this idea straight. This *health* insurance business is a fraud, there is no *health* insurance in it. If it were honest and came to us under the name of *sickness* insurance, we could have some respect for its promoters; but it is not even an attempt to increase health. It is merely an attempt to provide inadequate compensation for those who are unemployed because they are sick and to give inadequate compensation to our profession for the service it renders to them. It is purely a scheme for exploiting the profession, just as many of the health foods are; they call them "health" because that appeals to everybody. Everybody wants health, and they call this "health" insurance because the very term seems to imply a public benefit.

It is important for us to be considering the matter in connection with the selection of our legislators; it is important for us to make our knowledge of the subject evident to our Members of Congress and our Senators, because they are going to be called on to vote on this subject on the first of January next, or shortly thereafter. It is not going to do any good for us merely to send telegrams appealing to them to vote yes or no on particular issues, but it is important that those of us who have influence with them and in whom they believe present to them the arguments now, because they haven't thought of it, so that when it comes up in Congress and in the committees of Congress they will be forehanded and will understand the desires of our profession.

Our legislators and our Congressmen have always been responsive to the desires of the medical profession in these matters, because we have intelligently and in time taken steps to advise them about them, and I hope in this instance we will see to it that, as they come to our various towns to speak, as they shortly will be doing, we see the candidates for Congress and talk to them about this particular thing, explaining to them the very things that Dr. Leland has said, the things that we are getting in the Journal of the American Medical Association.

I want to say to those of you who are not getting the Journal of the American Medical Association and the Bulletin that it sends to the Fellows at the present time, that you are making the greatest mistakes in your lives, because in every week's issue the ammunition is being furnished us for this fight, and it is a fight for our lives and for the health of the people of this country, and it is going to be determined shortly what is going to happen in the matter.

We are just like the British to a very considerable extent; whenever they have once adopted any plan they never get rid of it; we have been under the domination of the lawyers so long that we ride too frequently with the crupper instead of the bridle and we move backwards over the precedents adopted, instead of toward the future.

I don't agree at all with Dr. Leland about the idea that we shall sacrifice ourselves for principle. That is a fatalistic idea that I don't agree with at all. We tried that down South some sixty years ago, we Confederates who were going to fight purely for principles, and we got the tar licked out of us; we were run by a bunch of carpet-baggers for about forty years after that, and we paid the price with our honor and our blood and our taxes and everything else, and are doing it yet. I believe in putting up the fight now, intelligently, because we are right and we can win if we do that.

I think that the thing to do is to arm our Congressmen with the arguments in regard to this thing, so that we may not be dominated by either the commercial insurance companies or by these so-called, self-styled social workers who are attempting to exploit our profession.

Mr. President, I would like to move you, sir, that the thanks of the House of Delegates of the Kentucky State Medical Association be extended to Dr. Leland for this splendid address.

The motion was seconded and carried unanimously.

PRESIDENT MARTIN: Dr. Leland, I assure you that we have all enjoyed this address.

There is a lady sitting back there who should have made her report some time ago, and we are now going to give her her opportunity. That is the report of the Committee on the Woman's Auxiliary, Mrs. B. K. Menefee, Covington, the President. (Applause)

MRS. B. K. MENEFEE: Mr. President, Members of the House of Delegates, Ladies and Gentlemen: I count myself happy to have the privilege of appearing before this splendid audience to bring to the House of Delegates of the Kentucky State Medical Association a report covering the activities of the Woman's Auxiliary during the past year.

We sincerely appreciate the trust you have placed in our organization and are endeavoring so to conduct our activities that you will never regret having granted to us the privilege of functioning as an Auxiliary to the Kentucky State Medical Association.

We honor you for the wonderful work being done in our state; through the study

and research of your members you are working diligently to combat disease in every way and spread knowledge that will assist the lay public in their health problems; it has been well said, "The public health is the foundation upon which rests the happiness of the people and the welfare of the nation."

One year ago my associates saw fit to elect me President of the Auxiliary and placed in my care the welfare of the organization for the ensuing year. Fully realizing that with duties come responsibilities, I assumed the office with trepidation. At times the work has been arduous and the responsibilities great, but with the cooperation of the officers and members we have finished the year and are ready to lay before you a brief survey of our activities during that period.

Realizing that whatever we undertook must meet with the approval of our Advisory Council, we prepared an outline of work for the year and submitted same to the members of the Advisory Council. This was approved and when presented at the Post-Convention Board meeting was adopted as our code, and reads as follows:

OUR CODE

1933-1934

1. Be guided in all state work by our Advisory Council appointed by the Kentucky State Medical Association. Each county auxiliary to be guided in county activities by the County Advisory Council appointed by the County Medical Society.

2. Make a thorough study of our state medical health laws from time to time, keeping abreast of developing changes.

3. Each county, wherever possible, having the following committee chairmen corresponding to state and national auxiliaries:

Archives
Child Health and Welfare
Finance
Historian
Hygeia
Jane Todd Crawford Memorial
Legislation
Organization
Public Instruction
Public Relations
Radio
Tuberculosis

4. Ask all county auxiliaries to file copies of their own constitutions and by-laws with the state parliamentarian.

5. Assist in entertainment at county, district and state meetings and promote unity and friendship through fellowship.

6. Further the Jane Todd Crawford Memorial project whenever possible.

7. Sponsor child health and welfare programs, our new phase of work.

8. Contribute news and items of interest to our quarterly section of the Kentucky Medical Journal.

9. Make an earnest effort to increase our membership by re-enlisting former members and securing new ones.

10. Work with other organizations, whenever possible, to further the aims of the Auxiliary.

11. Cooperate promptly with national recommendations and keep in close touch with Southern Auxiliary.

12. Study tuberculosis prevention and help fight this disease. Let us make an earnest effort to do all in our power to combat this disease.

Mimeographed copies of this plan were made, which were sent to all officers and to the various auxiliaries so that each member could be supplied with a copy. In this way I hoped to awaken an interest in the Auxiliary as a whole.

From reports received we find that this in a manner has been accomplished. To give to you in detail the reports that have been received I feel would be tiresome, but we want you to know that our women have been quite active during the year and herewith we present an outline of what has been done.

Our Chairman of Archives has done some excellent work. She has gathered information which we hope will be of value to the medical association.

Child Health and Welfare, our new activity for the year, has been of especial interest and we feel that our members have accomplished and will accomplish a great amount of good in their communities through contact that can be made with Parent Teachers' Associations in our schools, churches and in the clubs of our communities in which they are interested. All of these organizations are willing and anxious to have programs sponsored along this line of work.

In the matter of finance, we have been able to operate within the budget as planned for the year. Dues have fallen off somewhat, owing to the stress of the times, but with renewed interest and the addition of the new members we hope our balance in the treasury will increase.

Our Historian has a wonderful report to make. Through the combined efforts of the auxiliaries, she has secured biographies of sixty-seven physicians, also many historical documents of value. We are greatly indebted to her for the splendid report she has to offer.

Hygeia, the health magazine, has not had the support it merits this year in our state,

but we hope with better conditions and good use of the display of advertising, the sample copies sent us by the A. M. A. for this session, at this meeting we will be able to secure many subscriptions.

The Jane Todd Crawford Memorial project has taken on renewed interest, and with the splendid encouragement given our chairman during the past year we hope before the close of this meeting to report something indeed worthwhile.

Our Committee on Legislation is ready to act whenever occasion arises.

Under organization some active work has been done. Our chairman and her associates have sent out appeals for the organization of new auxiliaries and report two new ones. One is in Mercer County, the other in Glasgow, with members in four counties. It is known as the Auxiliary to the Glasgow Community Hospital. It was through the interest of Dr. C. C. Howard, the new President, that this was accomplished, and we are grateful to him. Harlan County has been reorganized and we are most happy about this. We sorely need their help and assistance in this section of the state. This adds forty-five new members to our roster.

Committees on Public Instruction and Public Relations are ready at all times to assist any auxiliary that needs their help along these lines. They will recommend literature that is available and advise our members in regard to meetings that can be arranged with other organizations and help them to secure this literature.

We are very proud of the record made by our Radio Chairman and regret exceedingly that she had to leave us before the close of the year to make her home in Utah. She was greatly interested in the work, procured speakers among the profession who were willing to speak over the radio, and their helpful messages were greatly appreciated and listened to eagerly by many of our people. She also sent out many health talks, sponsored by the American Medical Association, and inaugurated a movement among our members to obtain radios to be used in what is known as Listening Centers in our mountain section. Here families may congregate and enjoy broadcasts who otherwise would not have this privilege. One radio was procured for this purpose and I am sure had she remained with us her activities would have continued. This work was being done in cooperation with the University of Kentucky. We are sure her successor will carry on.

The report of our Chairman of Tuberculosis is one of the finest we have received. I wish time permitted me to give it in detail. Suffice it to say that many letters were written by her in an endeavor to interest our women in this work, both in the active auxiliaries and in those that had ceased to function. She carries a page in the Journal which is full of interest and gives us much helpful advice. She created quite an interest in the Christmas Seal sale, carried on the Early Diagnosis Campaign and sent special material to each auxiliary according to their need. In addition, about 800 pieces of special literature were distributed. All this was done with no expense to us because the Kentucky Tuberculosis Association lent its aid in this matter through our chairman. We sincerely appreciate their help.

The presidents of the auxiliaries have helped us greatly during the year, showing a willingness always to cooperate.

We considered ourselves highly honored in having been invited to participate in the dedication of the Doctor's Shop at Harrodsburg on June 21, 1934. We considered it a privilege to help with the furnishing of this building under your direction. A letter was sent to all officers, committee members and the president of each auxiliary in the state asking for their help in this matter. I am glad to report that our members are intensely interested in the project, and I am sure an earnest effort will be made by them to find articles of interest to contribute. In fact, several relics are to be brought to this meeting for your approval. Several old books have been offered. The titles and dates of publication of same will be submitted to you for your advice as to their suitability and where they are to be sent.

Words fail us in trying to tell you how much we appreciate the privilege of having for our very own the Woman's Auxiliary Section of the Kentucky Medical Journal. To our Editor, Mrs. A. T. McCormack, we owe a debt of gratitude for the excellent work she has done. Assisted by a few loyal members she has carried the burden of this publication for three years and has made a success of the venture. The report of the business manager tells us all debts are paid. Many letters of commendation concerning the Journal have come to us from other states.

We wish to note here some of the activities reported by our auxiliaries:

Courses are sponsored where Kentucky state health laws are studied, also medical history, biographies of the pioneers of medicine, especially those of Kentucky, whom we delight to honor and who amid so many trials and hardships were able to establish their beloved profession in Kentucky.

The National Study envelopes are being

used. The new ones are recommended as soon as they are ready for distribution.

Addresses are delivered by physicians and nurses from time to time.

Some research work is being done that we feel will be of interest to the profession in Kentucky.

Study has been made of the activities of the Community Chest in order that we may understand the work being done along this line in the state. The Louisville Auxiliary visited seventeen of the thirty-five agencies in that city.

The sewing units are doing a splendid work. Layettes are made for babies. These are donated through the hospitals for needy mothers.

Bedding and blankets were made for maternity wards when funds permitted. A donation was received from one medical society to help in this matter and we take this opportunity to extend our grateful thanks.

Members assist in health clinics whenever requested to do so.

Donations of canned vegetables, fruits, preserves and jellies were given to children's homes at the Christmas season, also toys, oranges and apples to help fill the Christmas stockings.

Christmas Seal sales were sponsored. One auxiliary reports sales amounted to $67, others that each member bought at least $1 worth.

The social side of our organization has not been neglected. One auxiliary has a golf unit that meets once a month.

Banquets, luncheons, parties and other diversions are indulged in. Refreshments are served at the evening meetings and often the doctors are invited to participate.

Annual luncheons are held by some of the auxiliaries where plans for the year are outlined, others making a dinner event of this occasion also provide a speaker and have a musical entertainment.

The auxiliaries are 100 per cent perfect on reports this year.

We have eleven auxiliaries representing seventeen counties. Members of the state at large, 20; honorary members, 2; new members, 48; county membership, 344 (this includes new members); total membership, 366. Dues paid on 192.

I have tried to lay before you a report of the activities of the Woman's Auxiliary for the past year. We may have made some errors, but certainly through no lack of interest. I feel that I can also assure you that we stand ready and most willing at all times to be of every service in our power to the Kentucky State Medical Association. (Applause)

IRVIN ABELL, Louisville: Mr. President, in moving the acceptance of this report, may I take your time just for a moment to comment briefly upon the excellence of it. To those of us who remember the start of the Auxiliary of the State Medical Association at Crab Orchard some years ago (I am sure it comes as a surprise possibly to some of you who are not entirely familiar with the work) it is very gratifying to hear of the extent, the width and the scope of the activities of the Woman's Auxiliary. From a very small beginning it has grown into something that is really worthwhile in that its work parallels the aims of the State Medical Association and because of the excellent way in which they have accomplished it. I am sure that we are indebted to them for the interest which they are taking not only in our own work, but the sincere efforts they are putting into the furtherance of our aims. (Applause)

SECRETARY MCCORMACK: May I ask you one question? Have you an auxiliary in your county? Is your wife taking part in helping to support this work? I would like you to think about that seriously and sincerely, because there is no group amongst us that can exercise more influence. You know it mighty well because she has already influenced you to your betterment, and she can influence the whole State of Kentucky to its betterment. Our women are really and sincerely, from their love for us, working for the common welfare of the state we love.

PRESIDENT MARTIN: All in favor of the adoption of this report make it known by the usual sign; contrary.

The report was adopted.

PRESIDENT MARTIN: The next report is that of the Medico-Legal Committee. Dr. J. B. Lukins.

REPORT OF MEDICO-LEGAL COMMITTEE

J. B. LUKINS, Louisville: Mr. President and Gentlemen of the House of Delegates: Up to about three months ago I was congratulating myself that the number of malpractice suits this year was very much on the decrease. It seems, however, that in the last two or three months business has picked up materially. Since our meeting last year at Murray there have been filed against doctors in good standing in our society twelve malpractice suits. There have been several suits threatened, some of which we have no record of. We have won nine cases in court, one of these was lost in the lower court but won in the Court of Appeals. Many of you are familiar with the decision of the Court of Appeals, which had a far-reaching effect, in what is now known as the famous Stacey case.

There have been four cases dismissed without trial. There have been three cases settled out of court. There was a special reason why it was good judgment to settle each one of those cases. The first case was that against a country doctor in a small town who was also the general merchant of the town. There was the least bit of merit in the case but none to speak of, and rather than have any publicity he desired its settlement, so the plaintiff was given $10 and the plaintiff's lawyer $10 and the case was dropped.

The second case was one that we have not encountered before. A patient engaged a doctor to remove tonsils by diathermy and paid $50 cash. It seems that in the course of a few months the patient went to another doctor, and without thinking he said, "Your tonsils will have to be removed."

"Why, I paid Dr. So-and-So $50 to remove my tonsils by diathermy."

He said, edging a little, "Well, they must have come back or there must be some fibroid condition there," so the $50 was returned to the plaintiff and that case was dropped.

The third case was an unfortunate case against one of the ablest doctors in the state and one of the most lovable doctors in the state. This really was not a case of malpractice, it was a case where an accident occurred during the course of a throat operation and the results were more or less expensive. The patient got well eventually, and through the advice of some eastern consultants in the case it was deemed best to settle this case.

They are the only three cases that have been settled out of court.

We have at the present time nineteen cases that are still pending in court. Judging by previous experience, almost half of these will never come to trial.

Fractures continue to head the list, but by way of variety, two this year we have never experienced before. One is a case where a doctor dropped nitrate of silver in a baby's eyes in 1923 and no claim was made or suit filed until this year. The other is a case of tonsils being treated by diathermy and later being removed by tonsillectomy. The question involved in this case was that the tonsils did not disappear and the fee for the diathermy being returned to the patient.

Dr. Hayes referred to the case of the baby today. I might say by way of information to Dr. Hayes to take back to his doctor friend, that we have this case well in hand and personally I feel no apprehension about the outcome.

We have several inquiries each year as to what our Medico-Legal department is and just how much a practicing physician may expect of it. I wish to answer that before the House of Delegates. The Kentucky State Medical Society investigates and defends malpractice suits against any of its members who are in good standing. It seems that during the depression that has been one of our greatest problems. We have gone ahead in two or three instances and defended several doctors, some of them our intimate friends, almost, and then have waked up to find out that they were not in good standing, that their dues had not been paid. So I insist that the Secretary or Treasurer of the county society, whoever's duty it is, sees that the dues are paid up, otherwise they are not entitled to medico-legal defense.

We pay the attorney and court cost and furnish expert witnesses, but we have no fund to pay any loss in case we lose.

We are proud of the record that we have not lost a case in more than three years. To be in good standing your dues in your county society must be paid.

Our experience shows that none of us are immune. Every general practitioner, every specialist, every surgeon and every x-ray technician may be sued at any time in an effort to obtain damages or to be relieved of paying for our professional services. We find that there is an increasing percentage each year of counter-suits. People either are not disposed to pay their bills or they have nothing to pay them with, and then when the doctor presses for his professional services a counter-suit is filed.

Every professional service rendered, no matter how skillfully or conscientiously, may be the basis for a malpractice suit in the hands of some unscrupulous person and designing lawyer.

We find the better class of the legal profession over the state glad to come to our rescue in case of a suit, and by having a mutual understanding previous to the trial we have in the last few years been able to handle these cases for a very moderate charge.

By good lawyers and with the cooperation of the leading doctors our cases are won. I hope you will all get the full meaning of that short sentence. It doesn't make any difference how good a lawyer we have, it doesn't make any difference what kind of case it is, if we do not get the cooperation of the leading doctors in the county in which it takes place we will not get very far. I stressed that in my paper before the society two years ago. So far I have never been refused.

The whole profession owes a debt of gratitude to busy doctors who freely and willingly give us their time and the benefit

of their experience in court testimony and statements in the various cases.

Dr. Hayes this afternoon in making his report spoke of how much a doctor got for paying $5 to the Kentucky State Medical Society. He gets attendance at the society meetings, he gets his State Journal, he gets all the other benefits of his state society, and in addition he gets the services of the Medico-Legal Committee.

I can best explain how much that is by telling you the details of one case that occurred just a very few months ago. Some of you know that most of the insurance companies do not continue to carry insurance past seventy years of age. One of the nicest doctors in the state, seventy-two years old, was sued since our last meeting. The case was like this. A little girl was thrown and sustained a compound comminuted fracture of the elbow joint. She was taken to this elderly physician who did not recognize it as a fracture and applied a sterile bandage and sent her home. In three days she was returned to him complaining again. At that time he stated that he advised x-ray picture be made and that the child be sent to a hospital in Louisville. There were two witnesses who testified that he used a pair of scissors that were not properly sterilized to enlarge the wound, and so on and so forth, and infection developed and the child has an ankylosis.

To make a long story short, the judge threw the case out of court on the motion of our attorney, Mr. Curtis. It was only possible to do that because two of the busiest doctors in the city of Louisville and Mr. Curtis and myself gave a whole evening's time and all of the next day to trying this case in court. These doctors who responded so graciously when I asked them to go did not receive a cent for their services, they lost a whole day from their offices and the hospital, they paid for their own gasoline, we paid for our dinners, and we lost the day, and this doctor was cleared of this malpractice suit which probably would have ruined him in the community. It cost him the grand total sum of $5.

I believe Dr. McCormack, that we ought to set aside a sum in our State Association that would recompense these doctors who so willingly respond to these calls, and repay them at least for their time, the cost of their transportation and their board while they are attending these trials out of town. (Applause)

C. A. VANCE, Lexington: Mr. President, I move you that this report be accepted and I would like also, to move that the committee be given the thanks of the House of Delegates and the State Medical Association. I hope personally that this committee will be continued as it is.

The motion was seconded and carried.

Vice President Morrison took the Chair.

CHAIRMAN MORRISON: The next report is that of the Committee on Medical Ethics, W. I. Hume, Chairman.

W. I. HUME, Louisville: Mr. Chairman, Members of the House of Delegates: My report will be rather brief. I think there are two very good reasons for that. One is that I haven't heard from the other members of the committee, although they were asked to cooperate with me. I take it for granted that they think medical ethics in Kentucky must be around 100 per cent o. k. Another is that it is my personal notion that a study of medical ethics in any such situation requires quite a long time, much longer than we had to devote to it. In fact, a committee held over and made to study this problem from year to year probably would have some very constructive things to offer.

Your committee has nothing that is really new and nothing that is startling to report concerning the past year in Kentucky medical practice. Yet it is undoubtedly true that all the old sins against the code of medical ethics are being practiced as always and some accentuation due to the present economic stress is to be expected. Then we note that other problems in this field, while not new, are rapidly developing and demand careful consideration by our profession.

In the first category, old sins against the code, we note a long list of sins of omission and commission. Most of these are of minor importance and nearly all of them are too well known and understood to warrant enumeration here. Many of them are matters of etiquette and not of ethics and correction as a rule to be found in good manners, character and the simple application of the Golden Rule.

Among the older crimes against the code, the one that is and has been for long of outstanding importance is fee splitting. The secret division of fees openly or by subterfuge, the acceptance of commissions and trading of patients is, in our opinion, a major blight on the proper development of medical practice. In spite of our wonderful record as a profession of unselfish service to humanity and in spite of all the preaching of our code and in spite of solemn oaths prescribed, this practice goes on apace. There are some among us who profess rather openly to see no harm in this practice and who profess to live righteously in all other respects. We realize that much has been said but almost nothing done to curb this damnable practice, and that a re-introduction of

the subject may seem utterly futile. However, this particular committee believes that this organization by constantly preaching its unalterable opposition to such practice can do some good, and, further, we recommend that the profession in Kentucky take the lead in demanding that, since all other methods fail, the College of Surgeons or other proper authority be urged to employ agents to ferret out the guilty. Humanity and good doctors would profit much by any curbing that might result.

Among the more recent developments in this field we would call to your attention some of our difficult relations in the matter of contract practice. The matter of health insurance as inaugurated by certain hospitals is another problem which is often embarrassing to doctors. Then the deliberate attempt of certain business and social agencies to take over the care of the sick and injured and hire doctors to do the professional work is complicating the relations of doctor to doctor and doctor to the public rapidly. This committee has not gone into a detailed study of the problems here named, but it does feel that there is a lack of clear-cut definition and lack of rules of conduct.

It is opposed to any insurance or clinic program which denies free choice of a physician and free choice of hospital. The relations of physicians to each other and to their public are becoming more complicated and so important that constant interest and activity of our state organization in this direction is indicated, and, further, your committee believes it a matter of great importance that courses of instruction in medical ethics be established in our medical schools.

PHILIP BARBOUR, Louisville: I move the adoption of the report.

The motion was seconded.

SECRETARY MCCORMACK: I want to call the attention of the membership to Chapter 1, Section 1 of the By-Laws: "All members of the component county societies should be privileged to attend all meetings and take part in all the proceedings of the Annual Session and shall be eligible to any office within the gift of the Association, provided that no physician may become a member of any county society unless he signs and keeps it. violate the following pledge: 'I hereby promise upon my honor as a gentleman that I will not so long as I am a member of the Kentucky State Medical Association practice division of fees in any form, neither by collecting fees from others referring patients to me nor by permitting them to collect my fees for me, nor will I make joint fees for physicians or surgeons referring patients to me, for operation or consultation. Neither will I in any way directly or indirectly compensate anyone for patients referred to me, nor will I utilize any man as an assistant as a subterfuge for this purpose.' "

I respectfully submit to the members of this Association that as long as that provision is in the By-Laws and every member has taken this pledge, we have no right to violate it if we continue to consider ourselves as members of the Association and as gentlemen. I believe that we should take a firm stand on this matter. I think there should be no compromising and I believe that any member of the Association should consider himself in honor bound to investigate and report violations of this pledge. Otherwise, we bring ourselves into contempt amongst ourselves and deserve the contempt of the public, because there can be no compromise on this subject at all, and we ought to understand it and we ought to make the people understand that we believe in it and that we faithfully propose to carry it out.

I am extremely glad that the committee has made this report, and I hope very much that its adoption will make each of us feel again pledged to renew our faith and to renew our zeal in upholding the ancient and honorable traditions of our profession.

CHAIRMAN MORRISON: It has been moved and seconded that we receive this report. Is there further discussion?

LOUIS FRANK, Louisville: I am not a member of the House of Delegates, but as ex-president of the Society I have, of course, the welfare of the society at heart. I think this is too important a report merely to pass by with what has been said and its adoption passed and the report filed. I think this report contains material of so much importance that I would like to see the adoption of this report deferred and have the report discussed at the same time discussion is had on the report of the Committee on Medical Legislation. I think it really should be part of the report of that committee. It contains matters that are of equal importance to those discussed here tonight in the address made by Dr. Leland. I would therefore move that the adoption of the report of this committee be deferred until discussion may be made at the time of the report of the Committee on Medical Legislation.

The motion was seconded and carried.

CHAIRMAN MORRISON: Next is the report of the Committee on Crippled Children, W. M. Brown, Chairman.

SECRETARY MCCORMACK: I have Dr. Brown's report that he asked me to read.

"The Committee appointed by Dr. Howard on Crippled Children wishes to submit the following report:

"From September 1, 1933, to September 1, 1934, the Crippled Children Commission admitted to hospitals in Lexington, Louisville and Ashland 830 children; of these 351 were new cases and 479 were old cases.

"Number of new cases receiving care outside of hospital, 110. Number of diagnostic clinics held, 20. Total number of children examined at these clinics, 1816. Clinics were held in the following places:

| | | |
|---|---|---|
| "Owensboro | Sept. 7, 1933 | 70 |
| Elizabethtown | Sept. 22, 1933 | 64 |
| Harlan | Sept. 27, 1933 | 63 |
| Corbin | Oct. 18, 1933 | 141 |
| Ashland | Oct. 27, 1933 | 191 |
| Covington | Nov. 1 1934 | 60 |
| Hazard | Nov. 15, 1933 | 98 |
| Paducah | Nov. 22, 1933 | 84 |
| Somerset | Nov. 23, 1933 | 72 |
| Covington | Nov. 1, 1933 | 60 |
| Owensboro | Feb. 22, 1934 | 75 |
| Somerset | May 9, 1934 | 78 |
| Mt. Sterling | May 14, 1934 | 80 |
| Paducah | May 23, 1934 | 107 |
| Covington | June 13, 1934 | 64 |
| Hazard | June 19, 1934 | 134 |
| Owensboro | June 21, 1934 | 84 |
| Hopkinsville | June 28, 1934 | 122 |
| Maysville | July 24, 1934 | 65 |
| Campbellsville | Aug. 14, 1934 | 113 |

"Total number of children treated since the beginning of the Commission, September, 1924 to September, 1934, 4115. During the past year a weekly clinic has been held in Lexington and Ashland.

"In addition to the work of the Crippled Children Commission, the Shriners' Hospital for Crippled Children in Lexington, Kentucky operating as one of the units of the National Shriners' Organization, during the past year admitted 112 children to the hospital; of these, 78 were new cases and 34 were readmissions.

"A weekly clinic is also held at the Shriners' Hospital and during the past year 967 children were treated in this clinic.

"Since the opening of the Shriners' Hospital November, 1926, a total number of 740 have been admitted to the hospital for treatment, and a total number of 6234 children have been treated from the outpatient department.

"At the present time it is estimated that there are some 3000 in the State of Kentucky awaiting treatment and because of lack of funds they cannot receive treatment at the present time.

"Your committee also wishes to express their appreciation of the friendly and unselfish cooperation of the general profession to the orthopedic surgeons, nurses, the Kentucky Crippled Children Commission and the Shriners' Hospital in Lexington.

"Respectfully submitted,

"W. Barnett Owen, Louisville
Orville M. Miller, Louisville
C. C. Garr, Lexigton
W. M. Brown, Chairman, Lexington."

I move the approval of the report, Mr. Chairman.

The motion was seconded and carried.

CHAIRMAN MORRISON: We are now down to the report of the Committee on Publicity, W. Clark Bailey, Chairman.

PHILIP BARBOUR, Louisville: Mr. Chairman, Dr. Bailey has asked me to submit his report for him. It is as follows:

This committee, composed of Dr. Clark Bailey, Chairman, Dr. W. B. Cawood, Harlan, and Dr. H. K. Buttermore, Liggett, has had the splendid cooperation of Harlan County's newspapers in presenting proper publicity for the 1934 convention. We especially wish to thank J. M. Alverson, Editor of the Harlan Daily Enterprise, for the publicity given in his paper.

We are also grateful to the Kiwanis Club for their splendid cooperation. It was our privilege to have Dr. C. C. Howard, President-Elect, and Dr. J. H. Pritchett, Chairman of the Program Committee address this club composed of more than fifty business and professional men about two months ago. We feel that through these efforts we were truly able to sell the medical convention to Harlan.

Through the convention number of the Journal you were presented many features of Harlan through special articles compiled for the most part, not by doctors, but by our business men who were willingly drafted for this particular work.

We feel that so far our publicity has been ample, favorable in the minds of the public, and in keeping with the ideals of publicity in the medical profession.

Respectfully submitted,
Clark Bailey, Chairman
W. P. Cawood
H. K. Buttermore.

S. C. SMITH, Ashland: I move it be adopted.

The motion was seconded and carried.

CHAIRMAN MORRISON: We will next have the report of the Delegate to the Convention for the Revision of the U. S. Pharmacopoeia, Virgil Simpson, Louisville.

VIRGIL E. SIMPSON, Louisville: Mr. Chairman and Gentlemen: As a delegate from the Kentucky State Medical Association to the Convention for the Revision of the next U. S. A. Pharmacopoeia, it became part of my

obligation to serve as a member of the Revision Committee.

This committee is composed of 51 members, 18 of whom are physicians. The remainder are representatives of schools of pharmacy, manufacturing pharmacists, wholesale drug associations, national and state retail druggists' associations.

This Revision Committee carries on the actual work of revision. Much of the work is done through correspondence, but occasional meetings are held for the purpose of settling questions which cannot be otherwise determined.

The first function of the Revision Committee is the determination of the medicinal substances to be admitted to the next Pharmacopoeia. The Pharmacopoeial Convention adopted as the fundamental principle governing the selection of substances to be admitted the following resolution:

"The object of the Pharmacopoeia is to provide standards for the drugs and medicines of therapeutic usefulness or pharmaceutic necessity sufficiently used in medical practice throughout the U. S. A. and its possessions."

These principles were further elaborated in its directions to the Scope Subcommittee as follows:

"It is recommended that the Revision Committee be authorized to admit into the Pharmacopoeia any substance or preparation whose therapeutic value is generally recognized by the medical profession or which is pharmaceutically necessary for the preparation of official medicinal substances or preparations; but no substance or combination of substnces shall be admitted if their composition or methods of manufacture be secret."

The work of revision of the United States Pharmacopoeia is nearing completion. The major part of this onerous task, consisting of selection of the medicinal substances to be admitted, of determination of standards, of fixing nomenclature, of cooperation in setting up international agreements, is all but done and proofreading of manuscript is now in progress.

### Scope

The Subcommittee on Scope has selected some 600 agents for admission to the U. S. P. XI. Nearly 400 of these were found in U. S. P. X. Over 200 new titles were proposed by Revision Committee members and others interested, and, in addition, every title in New and Non-Official Remedies, issued by the A. M. A. has been studied. When the vote by the Sub-committee on Scope is not decisive, the agent in question is referred to the Subcommittee on Therapeutics for additional study and recommendation. This latter committee is composed entirely of physicians.

### Deletions

More interest has been manifested in the announced deletions than in the proposed admissions. And the objections to deletions have come very largely from the pharmacists. The medical profession has shown small interest in the forthcoming book. It is readily apparent that as the science of medicine broadens, some drugs found in one edition will be denied admission to the next. A better knowledge of disease processes, the discovery of new causes, the advent of a new drug may make a deletion of the effete and admission of the worthwhile a matter of sheer necessity. Guided by these principles, approximately 100 titles found in U. S. P. X have failed of continued recognition in U. S. P. XI. Another principle guiding the Scope Committee is to endeavor to make the Pharmacopoeia a leader in therapeutics rather than a museum. The Subcommittee on Scope has endeavored to make the U. S. P. XI sufficiently inclusive to answer the usual therapeutic needs of the physician at the bedside. It is felt that so well has this object been attained that he might practice, regardless of specialty, wholly within the Pharmacopoeia. Yet another principle guiding the Scope Subcommittee has been the uselessness of admitting several drugs each completely sharing the pharmacological activity of the others.

And, finally, the Scope Subcommittee has felt that before a drug should be admitted it should have been in demand enough to justify its standardization. In other words, the drug must be a therapeutic necessity.

In studying a cross-section of the 115,000,000 prescriptions written in 1931, it was found that nearly 200 of the titles in U. S. P. X rarely appeared. The frequency of use of a drug does not necessarily establish relative importance. Because bicarbonate of soda was used three times as often as quinine need not be interpreted as meaning it is three times as useful. Physicians must be creatures of habit. Besides, they do not manifest much interest in new pharmacologies. It would be interesting to know how many of the members of this House of Delegates have bought a new text on pharmacology since they graduated. How many of you own a Cushing or a Sollman or a Gottlieb and Meyer, or a Bastedo or a Bethea? You buy new texts but not these. Yet prescriptions are written. What is ordered on them? Trade names, proprietaries, even secret formulas are more commonly ordered than U. S. P. titles. A physician engaged in a specialty was asked to contribute some prescriptions to the U. S. P. exhibit at this meeting. Of the six he

wrote only one that did not have unofficial titles. The profession is not interested in the U. S. P. Their advocacy of new remedies is not always an evidence of being up to date. There is nothing commendatory in ordering a drug or a combination for a patient about which one knows little or nothing. It does not insure your profundity to change the medicine at each call; it is a cheap bid for popularity to impress the patient that one is so ultra-modern that an order must be dispatched to New York or New Jerusalem for a drug so new no druggist stocks it.

And then, too, there is the bill to pay. When one orders alluric-amino-alpha-zize the manufacturer automatically smiles. He has spent a goodly sum advertising it to the profession and he welcomes the harvest moon. And after the doctor has prescribed it a bit the public gets the habit and the manufacturer turns to direct advertising to the consumer; it's cheaper. He also may succeed in establishing it as a household remedy and the grocer and the confectioner may sell it.

The American public bought $715,000,000 of drugs and sickroom supplies last year. It is true that $357,500,000 of that sum went for patent medicines, but the remainder, spent for medicines on doctors' orders, cost too much. We have tried to carry home something of this idea in the U. S. P. booth in this building.

I welcome new drugs when they do something the old ones don't do or do what they did better. But why not let them be tested in the large hospitals where numbers and records count? There are few specifics, and in the case of the others, what is the value of their use in isolated, long separated cases, with no recorded observations? This State Association listened to many such laudations of a certain biologic in 1919 in Ashland. Not one was based on recorded observations, and only a few on well authenticated diagnoses. May I appeal, without intent to offend, for a greater familiarity and more frequent use of U. S. P. titles, with the assurance of a quarter of a century's experience that the mortality curve will not be deflected skyward.

The Board of Trustees of the U. S. P. is planning for a campaign of publicity. A part of this has already been carried into effect by the maintenance of an exhibit at the annual sessions of the A. M. A. and of an exhibit at the Century of Progress Exposition in Chicago during the past year. It is also interesting to note that at the Pan-American Medical Association meeting held at Dallas, Texas, March 21, 1933, a Pharmacopoeial Section was established. Professor Bradley of the Committee of Revision was appointed as the official representative of the U. S. P. at that meeting and your delegate was invited to present a paper in the program.

The admission of drugs bearing trade names became a problem for the Revision Committee. A physician uses a new local anesthetic, he is pleased with it, then he wonders why it was not admitted to the Pharmacopoeia. There are several angles to such a proposal. Such a drug has a name and a standard of strength and purity determined wholly by its owner; he may alter it when and how he cares. If such a drug were admitted under the trade name, unless the owner consented, the Trustees of the Pharmacopoeia would become financially liable for action; if it be admitted under some other name and other standards be set up, it is not the same drug; if the owner agreed to its admission then the Pharmacopoeia has only succeeded in advertising a privately controlled preparation. When a proprietary becomes a free-for-all it may be admitted under a selected name, a standard may be set up for its purity and strength, and any manufacturing chemist may make it. And simultaneously its cost falls. A number of medicines now official were once proprietaries. Lugol's Solution, Basham's mixture, ethylanum, are a few ready examples.

Another reason why the profession has not followed the Pharmacopoeia more closely is that it has been revised every ten years. Much happens in the medical world in ten years. A worthwhile discovery, like insulin, may happen one year after the book is issued and heretofore it must wait nine years for admission. The present Revision Committee under authority of the Pharmacopoeial Convention, has provided for interim revision. I believe this is the most worthwhile single thing the Revision Committee has done. Under this plan, when a new discovery becomes a therapeutic necessity, it will be admitted by the Committee. This will keep the book revised to date and through the ten-year decade.

Elsewhere I have proposed as a means of checking the present tendency to patent everything medical, that if a product be admitted to the Pharmacopoeia its trademark and patent rights end. A large number of biologics, vaccines and serums, have been denied admission. It may grieve some physicians to learn that the so-called cold and "flu" vaccines have failed of entry; that acne vaccine and bacteriophage were left at the post; that anti-pneumococcic serum type II. III, IV and anti-scarletinal serum were not booked. We feel their prohibition represents the advanced thought of the profession.

Standards have been set up for Vitamines A and D. Important as the others are, work

on their standardization has not reached the degree of accuracy warranting their admission. To some it will come as a surprise to learn that the Pharmacopoeia is interested in color, that a vast amount of work and much money have been expended on the problem and the U. S. P. XI will be the first scientific publication to carry a color nomenclature having its justification in scientific data. This work comes through cooperation of other scientific and industrial bodies agreeing to the nomenclature. In your laboratory its influence will be felt.

### Proposed Federal Food and Drugs Act

(S-2800, Revised to March 15, 1934)

The U. S. Pharmacopoeia is not a governmental publication, but the Food and Drugs Act of 1906 recognized the Pharmacopoeia by selecting its standards of purity and strength for government enforcement of law. Each revision of the Food and Drugs Act since that time has continued that recognition. The bill proposed for passage in Congress of 1934 broadened the definition of the term "Official Compendium" to include with the Pharmacopoeia the National Formulary and the Homeopathic Pharmacopoeia of the U. S. Inasmuch as the Homeopathic Pharmacopoeia has not been revised since 1914, its inclusion would not appear to be particularly helpful in the operation and interpretation of the new law.

A still further legislative encouragement is provided by the proposed bill which permits the Secretary of Agriculture to designate texts or methods of assay for determining whether or not a drug complies with legal standards. It should also be noted that there has been in recent years a tendency of the courts to extend the scope for proofs of illegal manufacture or sale of drugs not conforming to Pharmacopoeial standards. Particularly significant is the variation clause of the so-called Copeland Bill. Definitely new significance has been given to the variation clause in this bill as compared with the Food and Drugs Acts preceding it. There are certainly serious objections to the introduction of a blanket clause which would permit anyone to make changes in official products, since by such variation the sale of inferior and adulterated products would be pooled under official titles. In this connection it must not be forgotten that the primary intent of the Pharmacopoeia was to make it a book of standards applicable to drugs and chemical products used in pharmacy and medicine. The extension of its standards to the field of foods and chemicals in art was not contemplated.

This brief reference merely gives you an index to the many problems which have confronted the Revision Committee. I personally am not opposed to the Government attempting to establish variation for official standards by logical and convincing evidecne other than that afforded by the Pharmacopoeia.

### Titles Official in U. S. P. X Not Admitted to U. S. P. XI

Aconitina
Antitoxinum Tetanicum Crudum
Benzaldehydum
Buchu
    Fluidextractum Buchu
Clacii Glycerophosphas
Calumba
    Tinctura Calumbae
Cambogia
Cimicifuga
    Fluidextractum Cimicifugae
Cinchophen
Cinchonidinae Sulphas
Colchici Cormus
    Extractum Colchici (Cormi)
    Fluidextractum Colchici (Seminis)
Colocynthis
    Extractum Colocynthidis
    Extractum Colocynthidis Compositum
Cotarninae Chloridum
Cubeba
Elaterinum
Emplastrum Capsici
Emplastrum Plumbi Oleatis
Eucalyptus
    Fluidextractum Eucalypti
Ferri Carbonas Saccharatus
Ferri Chloridum
Ferri Phosphas Solubilis
Ferri Sulphas Exsiccatus
Fluidextractum Belladonnae Foliorum
Fluidextractum Cinchonae
Fluidextractum Hyoscyami
Fluidextractum Rhei
Fluidextractum Schillae
Gambir
    Tinctura Gambir Composita
Ginger, Syrup of
Glyceritum Phenolis
Granatum
    Fluidextractum Granati
Guaicolis Carbonas
Hydrargyri Iodidum R[illegible]um
Hydrastis
Fluidextractum Hydrastis
Hyoscyaminal Hydrobromidum
Infusum Digitalis
Ipomoea
    Resina Ipomoeae
Jalap
    Resina Jalapae

Krameria
Tinctura Krameriae
Linimentum Calcis
Liquor Arsenii et Hydrargyri Iodidi
Liquor Ferri et Ammonii Acetatis
Liquor Plumbi Subacetatis
Liquor Potassii Citratis
Liquor Potassii Hydroxidi
Liquor Sodae Chlorinatae
Liquor Dosii Hydroxidi
Liquor Zinci Chloridi
Lobelia
Tinctura obeliae
Manna
Mistura Glycerrhizae Composita
Morphinae Hydrochloridum
Oleoresina Capsici
Oleum Cajuputi
Oleum Cari
Oleum Tiglii
Paraformaldehydum
Pepo
Phosphorus
Pilocarpinae Hydrochloridum
Pilulae Asafoetidae
Pilulae Hydrargyri Chloridi
Mitis Compositae
Pilulae Phosphori
Plumbi Monoxidum
Pulvis Jalapae Compositus
Pulvis Rhei Compositus
Quassia
Quininae Hydrobromidum
Quininae Hydrochloridum
Quininae Tannas
Rhus Glabra
Fluidextractum Rhois Glabrae
Rosa
Fluidextractum Rosae
Mel Rosae
Salicinum
Senega
Fluidextractum Senegae
Syrupus Scillae Compositus
Strontii Salicylas
Strophanthus
Tinctura Strophanthi
Sulphonmethanum
Syrupus Rhei
Tinctura Asafoetidae
Tinctura Cardamoni
Tinctura Cinchonae
Tinctura Rhei
Tinctura Valerianae Ammoniata
Trochisci Acidi Tannici
Trochisci Ammonii Chloridi
Ulmus
Unguentum Iodoformi
Unguentum Plumbi Oleatis
Uva. Ursi
Fluidextractum Uvae Ursi

SECRETARY MCCORMACK: I move that we approve the report and express our gratitude to Dr. Simpson for his labors in our behalf in this respect. I hope very much when this is published in the Journal every member will see that it is read before his county society. I believe this message is an important one for every practicing physician to hear, and it is the kind of thing that it is awfully difficult to get over, because it is hard for us to cure ourselves of bad habits. It is certainly a serious indictment of the profession when we must realize that we are writing continually prescriptions for proprietary drugs that have no potency and no use, that are tremendously expensive, that are only wasteful! It is our duty to familiarize ourselves with these standard preparations and to use them, instead of the expensive things that are made attractive to us through the advertising of proprietary houses. I hope very much that this splendid presentation will fall on receptive ears and that we will act upon it.

The State Board of Health recently had occasion, in the investigation of charges that had been preferred against a physician, to investigate the prescriptions that he had written. Out of 1800 prescriptions, more than one-third of them were for patent medicines that could have been purchased without the prescription for less, they were all practically worthless, and there was not a single prescription in the entire list that was not written for a proprietary medicine that is not recognized by anybody, anywhere, at any time. It seems almost impossible that one man could have found out about all those things; he had to go to a lot of trouble to find their names and their suggested indications, and he could so much more easily and readily have secured for his patients proper medicaments by some study of modern pharmacology.

I think we owe Dr. Simpson a tremendous debt of gratitude for having represented the Association for a number of years. It seems to me that it is of particular value that a man should continue to represent the Association in an important matter like this, where he is qualified to do it, through terms of years, rather than have a new man from year to year, because it is only in that way that he can establish himself with such an august body as the Pharmacopoeial Convention, and it is only in such way that he can exert the influence and add to the prestige of our own profession.

E. M. EWERS, Somerset: Dr. McCormack suggested that this should be read by each member. May I suggest one thing further that this collaborator of Dr. Simpson's in the ex-

hibit room have a few pictures made of those boxes with the comparative prices marked on them and include them in the report and mail one copy to every one of the 2,821, I think it was, registered physicians. Let them all read it.

S. C. SMITH, Ashland: I want to urge the delegates and visitors to go in there and see some of these demonstrations. I think it is one of the most worthwhile things I have seen in any medical meeting.

CHAIRMAN MORRISON: If some of us would keep up our education by reading the Journal and not so much by the pamphlets sent out by the drug manufacturers, we would be better off.

It is moved that this report be received and adopted with the recommendations.

The motion was seconded and carried.

E. M. EWERS, Somerset: My motion carried with it that it should be printed and go to every doctor in the state.

CHAIRMAN MORRISON: That is understood.

Next is the report of the Committee on Post Graduate Work, Philip F. Barbour, Chairman.

PHILIP F. BARBOUR, Louisville: The Committee on Post Graduate Extension Course begs leave to report that the plan of having a team of two to go out to various centers to give intensive post-graduate instruction has seemed to be very successful in its results.

The first meeting was held in Cynthiana, July, 1933, and was attended by about seventy doctors from various adjoining counties. Subsequent to that meetings were held at Harrodsburg, Williamstown, Columbia, Frankfort, Paris, Greenville, Russellville, Winchester, Bardstown, Crab Orchard, New Castle and Campbellsville. We are much indebted to the doctors who so generously contributed their time and interest in making these meetings the success that they have proved. These doctors are George Hendon, Morris Flexner, Wallace Frank, Frank P. Strickler, Virgil Simpson, E. R. Gernert J. B. Lukins, E. F. Horine, Owsley Grant, Garland Sherrill, Malcolm Tompson, Winston Rutledge, W. I. Hume, J. H. Pritchett, F. W. Rankin, Fred Speidel, Oscar O. Miller R. L. Kelly and Lee Palmer. We exhibit also herewith a map of the state prepared by Dr. South showing the various centers and counties which have been reached. As you will note, the central part of the state has been fairly well covered. We are planning to have such courses in the other sections of the state if it is so desired.

In addition to this, as Chairman of this course, I have planned a post graduate course in pediatrics to be held at the Children's Free Hospital weekly beginning Wednesday, October 10th. The lectures will be from 10 a. m. to 3 p. m., giving the doctors the opportuity to attend and still be able to finish up a good deal of routine work. A small fee will be charged to cover the expenses of the course. The program is published in this issue of the Journal.

The Committee would like to recommend that the Committee be enlarged by appointment of at least one representative from each Councilor District. This should not be the Councilor, who has plenty to do, but someone who is interested and one who can also work up interest in each district for such meetings.

A number of states are operating such courses, as we are in our state, and most of them have set aside an appropriation to pay the lecturers for their time and expenses. We feel, however, that this is not necessary, certainly not as yet in our state, but we feel that the expenses should be paid for these long trips.

We wish to express our appreciation for the services of Dr. South, who has not only shown deep interest in the plan but has thoroughly circularized the districts in which the courses have been given and cooperated wholeheartedly in the work of the Committee. Such success as it has won is in large measure due to her help.

CHAIRMAN MORRISON: That is a very important project and should be thought of very carefully.

PAUL S. YORK, Glasgow: I move the report be adopted as read.

The motion was seconded and carried.

PHILIP F. BARBOUR, Louisville: I have the report of the Committee on Resolution on the death of Dr. J. G. Owsley.

The Kentucky State Medical Association desires to put on record its high esteem for Dr. J. G. Owsley of Lily and to express inadequately its deep appreciation of the fine services which he rendered to our Society. He made himself indispensable to the Association by his indefatigable attention to each request and ennobled his position by his unfailing courtesies.

This Association would extend to the family of Dr. Owsley its sincere sympathy in their affliction, and the Secretary is hereby directed to convey to the family this action of the Association.

SECRETARY MCCORMACK: I move the resolution be adopted.

The motion was seconded and carried.

CHAIRMAN MORRISON: Report of the Committee on County Hospitals, by Paul S. York, Glasgow, Chairman.

REPORT OF COMMITTEE ON COUNTY HOSPITALS

PAUL S. YORK, Glasgow: Mr. President

and Delegates: There are now 6,437 hospitals having a capacity of 1,270,046 beds within the continental United States. There was an average of 216,775 idle beds in 1933. Careful examination of the rate of population increase as over against the increase in hospital capacity indicates that in 1933 hospital capacity was far ahead of that of the population. Of all types of hospitals within the United States, there is a total of 511 county hospitals with a total capacity of 40,410 beds. The average number of county hospitals in each state is ten, the largest number being in the state of Wisconsin, which contains fifty-nine county hospitals. The total for Kentucky is four. Of the 120 counties in Kentucky, about fifty have general hospitals located within their bounds. The distribution of these hospitals throughout the state follows a close parallel with the distribution of good hotels, good roads, good schools, fine churches, and wealth. In other words, wherever the community is able, we usually find a hospital. In the poor sections where communications are bad, land and people poor, there is a corresponding lack of hospital facilities. In general we may state there is at present no lack of hospital facilities for those able to afford same or for the poor living in communities where there are sufficient population and wealth to provide for the care of the indigent.

The total number of beds in the hospitals and sanitoria of Kentucky is 6,077. The average number of beds occupied in the hospitals and sanitoria totals 3,560, giving us a daily average surplus of 2,517 unoccupied beds in the hospitals and sanitoria of this state.

The problem confronting this committee is how to provide hospital facilities for those unable to pay for hospital service and living in communities too poor to provide same for them gratis. The committee wishes to point out that this question of hospitalization is no different from that of providing adequate housing, clothing, food, and the various other necessities of life. It is purely and simply an economic question; boiled down it means those that are able ought to care for those that are not able, or, to put it more bluntly, it means a more equal distribution of the advantages of wealth, if not of the actual wealth itself. It is not the purpose of this committee to enter upon an economic discussion as to the merits and demerits of socialism or of the duties of the more fortunate to help the unfortunate. The committee holds that if there is to be more even distribution of the advantages of wealth, it should be wisely and economically administered.

In order to accomplish this purpose the committee submits the following recommendation and discussion: We have in the State of Kentucky 120 counties. Many are but buff and pink marks on the map, containing a court house, a jail, and an opportunity to provide offices for the most powerful and numerous family within the county at the state's expense. We believe it unwise to recommend that each of the 120 counties should establish and maintain a county hospital. In order to provide adequate hospital facilities throughout the state, we would anticipate the eventual consolidation of counties in function, if not in actual fact, to the number of forty or fifty. We would designate these forty or fifty sub-districts as hospital areas so distributed in respect to population and communication as to be accessible to all parts of the state and the establishment and maintenance of at least one general hospital within said district at the public's expense.

The committee does not recommend the establishment of new hospitals in districts where adequate hospital facilities already exist. We favor the use of the existing hospitals and sanitoria within the district. We recommend that the fiscal courts of each hospital district provide in proportion to their population and wealth for the care of their indigent patients in the hospitals or institutions of their district by entering into contract with the hospitals contained within such district for the hospitalization of their poor.

The committee recommends that a tentative plan of hospital districts be worked out by the State Health Department of some other agency, that the fiscal courts of the several counties contained within such a district make extensive investigation to find out whether a district hospital is justified, and whether existing hospital facilities already available are sufficient. If there seems to be a sufficient demand and need for a district hospital, it should be put to the vote of the people within the district, because if the hospital is to be built it must be maintained by a tax levied on all taxpayers of the district.

The committee feels that in review of the hospital situation presented in the first part of this report, the building of additional hospitals at the public expense in the state of Kentucky will be unnecessary at the present time. We do, however, believe that legislation to enable hospital districts to be formed and to provide the means and methods of supporting institutions within this district for the care of the poor should be formulated and presented to our legislature to be enacted into law.

IRVIN ABELL: I move the report be adopted.

The motion was seconded and carried.

CHAIRMAN MORRISON: Report of the Heart Committee, E. F. Horine, Louisville, Chairman.

E. F. HORINE, Louisville: This report is merely a continuation of the activities of the Heart Committee which have continued to center around a study of the etiological types of heart disease. The hypertensive type looms large, and, in fact, accounts alone for practically as many deaths as cancer and tuberculosis combined.

As last year, the Bulletins of the American Heart Association have been forwarded to the secretaries of each county medical society.

One symposium and one clinic have been held during the past year.

VIRGIL KINNAIRD, Lancaster: I move the report be adopted.

The motion was seconded and carried.

C. A. VANCE, Lexington: I would like to bring up a matter that is very near to the heart of one of our good women of the state. Miss Linda Neville ( I am sure all of us know about her and what she has done in the work among blind children) says that she has gotten so many cases lately of children who are blind from congenital syphilis, and that as Mrs. Mary Breckinridge wants to make all the people of the state worm conscious, she wants to make them all syphilis conscious, and she has sent this telegram to the association:

"Have begun talking syphilis insistently as I formerly talked trachoma. Want Association to give me mandate and appoint committee from which I can always get correct information to disseminate, such committee to contain oculist, aurist, orthopedist, psychiatrist, dentist, obstetrician and syphilis specialist. Announce me always cooperating in all eye cases.

Linda Neville."

She expected to be here but couldn't, so she sent this telegram instead.

I wish to make a motion that we cooperate with her in every way possible and that we appoint a committee, as she suggests to act with her. I would like to have Jethra Hancock named as chairman of the committee and ask him to pick out the rest of the committee.

PHILIP F. BARBOUR, Louisville: I would like to ask if an important member of that committee isn't a pediatrician.

C. A. VANCE, Lexington: Yes. I will add that.

The motion was seconded and carried.

E. M. EWERS, Somerset: I move we recess until the call of the President.

The motion was seconded and carried and the meeting recessed at 10:10 p. m.

## THIRD SESSION

THURSDAY, OCTOBER 4, 1934

The third session of the House of Delegates convened at 7:00 a. m., President C. C. Howard, Glasgow, presiding.

Roll Call.

SECRETARY MCCORMACK: There are 54 delegates present.

PRESIDENT HOWARD: We will have the final report of the Committee on Credentials.

A. M. LEIGH, Louisville: I have checked over the list of delegates that Dr. McCormack has and they are correct.

PRESIDENT HOWARD: They will stand approved if there is no objection.

Election of Officers. According to the Constitution, we begin, as we would in a Democratic or Republican convention, and come by counties. It would take a long time to call off all the counties and let each fellow nominate one from each county. I think you will all agree with me that we want anyone to nominate anybody he wants to from Goose Creek clear on up to Ashland. Every man in this Association is big enough to be president and we know that, so don't take but about a minute to tell us about it. We are not going to stop until everybody has had all the fling at it he wants. We are now ready for nominations for President of the Kentucky State Medical Association.

ASA W. NICKELL, Louisville: Mr. President, Members of the House of Delegates of the Kentucky State Medical Association: I am advised by the delegates of the Jefferson County Medical Society that we have practically a united phalanx for the endorsement of a candidate for President for the ensuing year. We don't want sentimentality to enter into this thing. There is scarcely a man here within the sound of my voice but who would make an ideal President. We have plenty of material, not only in Louisville, but throughout the state. It naturally and logically goes to Louisville for this year, as most of us know and are agreed upon.

I would like, however, to present for President for this year a man well and favorably known to you all, who is perfectly capable of presiding over the destinies of this Association, whose contributions in certain lines of endeavor of material benefit I believe have been unexcelled in the history of this Association. The man to whom I allude has been a member in good standing of the Association for many years, both his county, state and the national organization.

He is an ex-president of the Jefferson County Medical Society, and under his regime we had an unusual organization and society, very constructive, fine in its outlines, in its conceptions, in its visions, in its accomplishments.

This man has been at the head of our Medico-Legal Department of the State of Kentucky for a period of eleven years. I am advised that he has gone to the four corners of the state, has paid his way here and there, and nobody has contributed a cent to the expenses which have accrued. This man, I understand, also has saved the reputation of many, many physicians who have gotten in the toils of the law, and has also, as I am reliably informed, saved the homes of a number of you gentlemen, possibly kept your wives living with you.

All these things, gentlemen, bespeak a great deal of work, tireless effort and accomplishment on the part of this gentleman.

It gives me great pleasure, therefore, on the part of the Jefferson County Medical Society, to present to this House of Delegates for your suffrage, the name of Dr. J. B. Lukins of Louisville. (Applause)

W. Barnett Owen, Louisville: I want to make a long nominating speech for Dr. Lukins, I second the nomination.

W. E. Gardner, Louisville: I make a motion that the nominations be closed and that the Secretary cast the ballot for President of the Kentucky State Medical Association.

The motion was seconded by L. C. Hafer, Covington.

President Howard: Any comment? All in favor of the Secretary casting one ballot say "aye," all opposed "no." It is carried.

Secretary McCormack: I have the honor of casting the ballot of the House for President of the Kentucky State Medical Association.

President Howard: Dr. Lukins is elected President of the Kentucky State Medical Association. (Applause)

I will designate Dr. Nickell and Dr. Hutcherson to escort Dr. Lukins to our meeting.

Next is the election of Vice Presidents.

Secretary McCormack: The Vice Presidents should come from the three sections of the state, central, western and eastern, not including Louisville.

J. H. Pritchett, Louisville: I wish to submit the name of R. L. Collins of Hazard.

H. G. Davis, Marrowbone: I wish to nominate Dr. P. W. Bushong of Edmonton.

Secretary McCormack: He is not eligible. He is a delegate.

Luther Bach, Bellevue: I want to put in nomination Dr. B. F. Robinson, Lexington.

W. I. Hume, Louisville: I second the nomination of Dr. Collins.

L. C. Hafer, Covington: I second the nomination of Dr. Robinson.

H. W. Nyce, Jeff: I nominate Dr. George Bushong.

Secretary McCormack: Dr. Bushong is a delegate and is not eligible.

C. F. Long: I nominate Dr. R. T. Layman of Elizabethtown.

President Howard: There are now three nominees. Let's vote on them all together. They are R. L. Collins of Hazard, B. F. Robinson of Lexington and R. T. Layman of Elizabethtown. All in favor of these three men say "aye." They are elected.

Secretary McCormack: I regret to raise a point of order that elections are required to be by ballot.

S. C. Smith, Ashland: I move that the Secretary be directed to cast the ballot of the House for the Vice-Presidents of the Kentucky State Medical Association.

Secretary McCormack: I have the honor of casting the ballot of the House for the three candidates for Vice-President of the Kentucky State Medical Association.

President Howard: Collins, Robinson and Layman are elected.

Secretary McCormack: Councilor for the Fifth District for five years.

President Howard: That is Louisville.

W. Barnett Owen, Louisville: Dr. Gardner has been Councilor for ten years and he has been a very excellent one. I asked him this morning if he would consider reelection. He feels that he has done his duty. I think so myself. I have in mind equally as good a man to present to you who has never had any office in this Association. He is not connected with the Medical School and he is not doing any outside clinical work, and he is only minding his own business and attending to his own practice. He is connected with no faction or organization. Everybody likes him. He is a man who has contributed a good deal to the Kentucky State Medical Association, to the county society and to the national organization, and I feel that he would be very excellent timber for this very important position of Councilor. As a matter of fact I think the Councilor in some respects is more important than President, because the Councilors have a lot of work and not much honor and the job lasts for five years.

I would like to present the name of Dr. Chauncey Dowden of Louisville.

J. H. PRITCHETT, Louisville: I second the nomination.

PRESIDENT HOWARD: Are there any other nominations?

C. A. VANCE, Lexington: I move you that the Secretary cast the ballot for the House for Councilor for the Fifth District.

The motion was seconded and carried.

SECRETARY MCCORMACK: Mr. President, I have the honor of casting the ballot of the House for Councilor for the Fifth District for five years.

PRESIDENT HOWARD: Well, you voted for Dowden. He is elected.

SECRETARY MCCORMACK: Councilor for the Ninth District is Dr. S. C. Smith, whose term expires. Councilor to be elected for five years.

L. H. WINANS, Ashland: I am of the opinion that during the regime of Dr. Smith we have had probably one of the best Councilors we have ever had, and I nominate him for the next five years.

The nomination was seconded.

L. C. HAFER, Covington: I move the nominations be closed and the Secretary cast the ballot for Councilor for the Ninth District.

The motion was seconded and carried.

SECRETARY MCCORMACK: I have the honor and the very great pleasure of casting the ballot of the House for Councilor for the Ninth District for a term of five years.

PRESIDENT HOWARD: The ballot says Dr. Smith. He is elected.

SECRETARY MCCORMACK: Eleventh District, to succeed H. K. Buttermore, for a term of five years. I nominate Dr. Buttermore to succeed himself.

W. BARNETT OWEN, Louisville: I second the nomination.

H. W. NYCE, Jeff: I make a motion that the nominations be closed and the Secretary cast the ballot for Councilor for the Eleventh District.

SECRETARY MCCORMACK: I have the honor of casting the ballot of the House for Dr. H. K. Buttermore as Councilor of the Eleventh District for five years.

PRESIDENT HOWARD: Dr. Buttermore is elected.

SECRETARY MCCORMACK: I have the resignation of Dr. R. C. McChord for Sixth District Councilor. Dr. McChord has served since the House of Delegates was organized, and in accepting his resignation I move that the President and Secretary be directed to write Dr. McChord a testimonial which will be properly embossed, in testimony of his long service to the Association.

PRESIDENT HOWARD: Dr. McChord has been an old war-horse.

The motion was seconded and carried.

SECRETARY MCCORMACK: I want to do a thing I very rarely do. I want to nominate a man who obviously qualified himself yesterday for membership on the Council. I should like to nominate Dr. A. B. Atkinson, Campbellsville. He made his own nominating speech yesterday and I think he elected himself. Everybody I have heard talk about it, wants to see him elected.

H. W. NYCE, Jeff: I move the nominations be closed and the Secretary cast the ballot of the House for Councilor for the Sixth District.

The motion was seconded and carried.

SECRETARY MCCORMACK: Mr. President, I have the honor of casting the ballot of the House for Councilor for the Sixth District for two years to fill the unexpired term of Dr. McChord.

PRESIDENT HOWARD: Atkinson. Everybody is pleased with that; he's a good one.

SECRETARY MCCORMACK: Delegates to the American Medical Association, two for a term of two years to succeed Dr. Irvin Abell and Dr. A. T. McCormack.

W. BARNETT OWEN, Louisville: I would like to move that they be reelected. They have done a good job and they are familiar with the workings of the machinery—except Dr. McCormack, he is a little inexperienced, but I think he will learn if you give him more time.

The nominations were seconded.

E. B. BRADLEY, Lexington: I move that the nominations be closed and the Secretary be instructed to cast the ballot for Delegates to the American Medical Association.

The motion was seconded and carried.

SECRETARY MCCORMACK: With a certain amount of diffidence, mixed with mingled pleasure, I cast this ballot. I feel very greatly honored to vote for one of the gentlemen who has been named, and it is with considerable regret that I feel it necessary to vote for the other as long as he is the only one nominated.

PRESIDENT HOWARD: All right, they're elected.

Orator in Surgery.

L. S. HAYES, Louisa: I would like to place in nomination for that honor a man who has had quite a bit of experience in surgery, a man who has done a wonderful lot of good work for our state, and particularly for the Ninth District. I wish to place in nomination Dr. S. C. Smith if he is eligible for the place.

The nomination was seconded.

W. BARNETT OWEN: I move the nominations be closed and the Secretary cast the ballot for Orator in Surgery.

The motion was seconded and carried.

SECRETARY MCCORMACK: I have the honor of casting the ballot of the House for Orator in Surgery.

PRESIDENT HOWARD: Dr. Smith is Orator in Surgery.

Orator in Medicine.

C. A. VANCE, Lexington: Mr. President, last year at Murray I nominated a young man who has been in Lexington about ten or twelve years. He is well qualified, well trained, and does mighty good work, and he would honor the office of Orator in Medicine. His name is Dr. John Harvey. He was beaten by a western man, so I nominate him again today.

The nomination was seconded.

C. C. TURNER, Glasgow: I nominate J. H. Pritchett of Louisville.

ASA W. NICKELL, Louisville: I second the nomination.

SECRETARY MCCORMACK: As long as we are going to have an election I would like to nominate Dr. Austin Bell of Hopkinsville.

J. KENNETH HUTCHERSON, Louisville: I want to present the name of a man who has been very active and untiring in his efforts in behalf of the State Association, a man who has presented a very remarkable work in the past in the society. That is Dr. J. H. Pritchett of Louisville.

PRESIDENT HOWARD: He has already been nominated. (Laughter)

E. B. BRADLEY: There is a young man in Lexington who has done excellent work as an internist. He is really one of the outstanding men there and he has been a candidate for this position before. I would like to nominate Dr. John Harvey. (Laughter)

JOHN H. BLACKBURN, Bowling Green: I nominate Dr. Austin Bell. (Laughter)

SECRETARY MCCORMACK: I move the nominations be closed.

The motion was seconded and carried.

PRESIDENT HOWARD: I appoint Dr. Leigh, Dr. Vance and Dr. Nickell as Tellers.

The Tellers spread the Ballot.

SECRETARY MCCORMACK: The ballot shows Pritchett 30, Harvey 22 and Bell 11. There is no election. Dr. Bell will be dropped and Dr. Pritchett and Dr. Harvey will be balloted on again.

The Tellers spread the Ballot.

SECRETARY MCCORMACK: Dr. Pritchett receives 39 votes and Dr. Harvey 23.

PRESIDENT HOWARD: Dr. Pritchett is elected as Orator in Medicine.

Next I want to present to you our newly elected President of the Kentucky State Medical Association, Dr. Lukins. (Applause)

J. B. LUKINS, Louisville: It has always been a great mystery to me where the men who were being mentioned for President hid out while the election was taking place. I don't know that I have found out yet. I didn't know it took so long to elect a president. (Laughter)

I don't know what was said about me by Asa, of course I'm not responsible for that, I don't know a word he said. Yesterday I won one of these golf trophies, a first-class golf bag, and when I go marching home tonight with that golf bag under one arm and the presidency under the other, Mrs. Lukins is going to be one proud woman.

It really is an honor, a very great honor, and I can't tell you how very much I appreciate it, but of course there is an old saying that with every honor comes responsibility, and I realize the responsibility and the work connected with this office, but I intend to put my very best into it. Of course I can't do anything without the help of every member of this organization. It is only by cooperation that we will accomplish anything.

Now I am not very big and ordinarily I am not very loud, but I have a head of my own and I intend to use that head for the betterment of this organization, and I ask the help of every member of the Kentucky State Medical Association.

I suggest that hereafter when my friends suggest me for any office they don't pick out three of my special friends to name against me.

As we go from here this morning I want us to go with renewed energy and enthusiasm for the success of our profession. This is a remarkable organization, but it is not perfect by any means. There are a whole lot of doctors in the Kentucky State Medical Society that are not as good doctors as they ought to be, and I believe that if we think hard and work hard and keep our minds high, we really will make ourselves better and make a better medical society.

I hope in accepting this honor that I become not only a better doctor but a better man. I thank you. (Applause)

SECRETARY MCCORMACK: Mr. President, it is the duty of the House at this time to elect a chairman of the Medico-Legal Committee for a term of five years. I don't know how good a president Dr. Lukins is going to make, he has got to show that, but he sure has made a good chairman of that committee, and I would like to move that he be continued as chairman of that committee. I don't see any reason for breaking in a new horse when he is as young as he is and we can keep on working him for five years in double harness.

Asa W. Nickell, Louisville: I second the motion.

J. B. Lukins, Louisville: I feel I ought to be relieved of that duty. There are so many men here who can do it even better than I have tried to do it that I really would appreciate it very much if some of these men would be selected for the job.

H. E. Prather, Hickman: I am for Dr. Lukins but if he feels he doesn't want it I am going to nominate Dr. John Blackburn of Bowling Green.

Secretary McCormack: It ought to be in Louisville. Dr. Blackburn would be a good one, but it ought to be in Louisville, because he has to be in touch with Mr. Curtis.

J. B. Lukins, Louisville: It seems to me that this man ought to be in Louisville, because you are frequently in consultation with Mr. Curtis. Mr. Curtis is an expert in this line. He has never lost a single case in our experience and I really believe that it would be unwieldy for the chairman of this committee to be any place but Louisville.

L. H. Winans, Ashland: Mr. President, I don't know whether I ought to be corrected or not, but I think the man who took this up would have to pick up where Dr. Lukins left off and carry it along, and I suggest that, possibly, Dr. Lukins should pick an assistant to take it up, who would eventually become chairman.

W. E. Gardner, Louisville: Would it be practical for Dr. Lukins to continue at least during this year while he is President Elect? There will be another year at least before he would have the full responsibility of the presidency, and during that year let him select some man who might succeed him at the end of another year. Would it be practical to elect him for one year and then let him, in consultation with the officers, help select his successor?

Charles M. Edelen, Louisville: If Dr. Lukins really doesn't want it I would like to suggest Dr. McCarty.

A. C. McCarty, Louisville: I appreciate this, but I feel I am a young man in the House of Delegates. I am here for the first time, and I don't feel this should be given to me. I withdraw.

President Howard: Gentlemen, I am going to make a little talk. I want to say that I love every man in this organization and you are the men who made this meeting. This is the greatest organization in the State of Kentucky. It happened to me, like to Lukins, to fall my lot to be president, which I deeply appreciate, but you men run this organization and there is no better anywhere. I mean that. Now I feel Dr. Lukins should be relieved of this: it is a very vital office and it is going to become more vital and we are all going to have to get together stronger and we are going to have to be careful when someone comes in to see us who has been to see another doctor, that we don't say the wrong thing sometimes.

This man should be in Louisville. I am only making this as a suggestion. The Chair has no right to nominate anybody, but I know you will agree with me there is a man who has all the qualifications, especially as a man, and then through his training and his deep interest in doctors and men. That is Barnett Owen. He is the man, to my mind, to qualify.

Secretary McCormack: I take a great deal of pleasure in placing in nomination the name of Dr. W. Barnett Owen of Louisville for Chairman of the Medico-Legal Committee.

W. Barnett Owen: Just a minute!

Secretary McCormack: If you want to second the nomination I will yield the floor to you, but if you don't I am going to keep on speaking a little while. Dr. Owen is eminently qualified for the position. Of course he has to be drafted, and it is an interesting thing to me, Mr. President, and I would like to say generally about the membership of this Association, that when you watch the members as they come in in the morning or the afternoon, those that are busiest are on time, those that have the largest practice and the largest service are practically always present when the bell rings. For many years Dr. Owen not only has not missed a meeting of this Association, but he has never missed any duty. He is so modest that he will make a speech that I know will eminently qualify him for the position. I know the kind of modesty he always expresses. He is the most overworked man in Louisville today. It is a shame to put any more work on him, and yet I take a great deal of pleasure in putting this work in his hands because I know it would be so well handled.

J. B. Lukins, Louisville: I am sincere when I say that I don't want this job because it is arduous, but this isn't a thing that can be turned over like Orator in Medicine or Orator in Surgery; those men are through now. We have nineteen cases still pending; we are right in the middle of it. Dr. Gardner's suggestion is by far the best—not that I want to continue for this year, but if you will elect Dr. Owen or Dr. Gardner, either one, to work with me this year in this work, then at the end of this year I will get out and whoever you select can go on with it.

W. Barnett Owen, Louisville: Mr. President, leaving out all personalities, I am sincere in this, I would be glad to do what I can, whether I am on that committee or not, for any doctor in the state. You know that.

I have done so many times because I never know when the lightning is going to strike me. Maybe that is a selfish reason. At any rate, I believe that the suggestion made by Dr. Gardner, in view of the fact that there is so much business now going on of vital interest with which Dr. Lukins is thoroughly familiar, is an excellent one, and of course I would be glad to have the honor of assisting Dr. Lukins in any way that I could along with other honors he has recently acquired, and then turn it back to him as soon as he is through with all this excitement.

PRESIDENT HOWARD: Did we have a second to Dr. Owen's nomination?

The nomination was seconded.

SECRETARY MCCORMACK: I move that Dr. Owen be made Co-Chairman of the Medico-Legal Committee.

The motion was seconded and carried.

PRESIDENT HOWARD: Selection of place of meeting. According to the Constitution and By-Laws it goes to Louisville. I don't suppose there is any objection to that. If there is any objection that fellow can just stay at home next year.

Appointment of permanent committees. I haven't had time to look over the committee question since I have been here, and the committees have been so good that I will just hold them all over until I find somebody that wants to kick out and then I will fill that place, if that is satisfactory.

Now we are down to unfinished business. Committee on Medical Economics, R. Emerson Smith, Chairman. Dr. McCarty will make the report.

A. C. MCCARTY, Louisville: I will read to you Dr. Smith's report and then will read you a few suggestions that this committee thinks important. This is the report:

The Committee on Medical Economics realizes the difficulty in handling as complicated a problem as medical economics.

Our whole economic structure collapsed in 1929 and there is not a day or hardly a paper of the nation in which we do not find articles as to how the scrap-heap must be salvaged. The solutions offered are innumbered; they are the most harum-scarum, inaccurate, undependable, and exploitation is king if the utterances of our financiers, our legislators and our politicians are to be accepted as panaceas for our present existing financial conditions.

This chaotic condition has acted as a narcotic on the medical profession, and we seem to be in a state of lethargy waiting for a readjustment. The physicians of the nation have allowed the attack to be made on the profession and we have the remarkable report on "The Cost of Medical Care," a most inadequate, partial, provincial and dogmatic publication on a subject of its kind that has appeared in print in our generation.

Advantage has been taken of this period regardless of what the financial situation of the nation may be, regardless of the political, social and religious attitude toward our economic chaos. The medical profession must wake up to the realization of the fact that if we do not dictate to our law-makers and to the public we will be dictated to and the medical profession will sooner or later become a part of a machine. We will become the cogs in the wheels of an organized state, not necessarily a political organization, but we will become the cashiers, the tellers, the errand boys of another great American trust. Our skill, our brains and our work will be means of making millions for organized finance.

Beware of the bait that is being handed out to the medical profession, "It is better to get fifty cents on the dollar than not to get anything."

We have spent a good deal of time going over state medicine, and the most interesting feature of it is the underlying psychology. The medical profession has not been called upon nor allowed nor is it desired that it should express its opinion on the fee basis. The plans that have come to our notice in various states are inadequate. Suppose we pay the engineering profession or the legal profession on the same scale as the medical profession is being paid. In state medicine we would cease to have roads, we would cease to have bridges, and, gentlemen, the Congress and the Senate of the United States would leave Washington like the monkeys that Kipling described in the Jungle Book when Bigera, the panther, appeared. You would find them hanging onto any wreckage that might have been in the Atlantic or Pacific; they would not remain on the mainland of the United States.

The medical profession of today must wake up and act, for there is nothing left for the profession, provided it wishes to remain a self-governed and autonomous organization, and to frankly state the conditions under which it will continue to carry on, and not have these conditions dictated to us by aliens. We mean by aliens, individuals who are not in sympathy and to a large extent are ignorant of the great moral, humanitarian principles that control the actions of the medical profession.

We are in an age of standardization; we are standardizing everything, and it is utter folly to expect a plan mapped out by a large center of population to be adequate for the needs of our smaller cities and rural districts. The financial condition in one district

is different from another; the attitude of mind of the public in a city or county or state is radically different on many problems from that of other cities, counties and states. There are higher standards of living in some communities than there are in others; there is a deeper realization of responsibility in some communities than there is in others; the civic pride that exists in certain communities does not exist in others. These facts make it impossible to follow any one plan that may be set up. Again, we have the great moral principle that underlies the standards of our very existence, and that is inalienable rights of the individual to govern himself and to live as he so desires provided he does not infringe on the rights of others.

We are Americans and we are talking to a group of as pure Americans as we have in any profession in any state, and we believe in the freedom of speech, freedom of the press, religious liberty and the right to pursue happiness, and again we will reiterate that we are not in sympathy with the types of medicine that is going to be controlled and governed and dictated to by the laity of this country. The sacred rights that exist between the patient and the physician and the personal contact and the friendship will be destroyed. The incentive to develop and to acquire knowledge will be gradually but surely diminished. A mental apathy and atrophy will be the inevitable result.

Let us ask ourselves this question: Why is it that this great commotion has occurred regarding the medical care and the terrible expense that is attached to it which has created nothing short of a panic? Why so much hysteria? We believe that the psychology of this hysteria is due to the fact that other professions are adequately remunerated and the public has been taught that if they wish the services of the legal profession or of the engineering profession, of the druggist, of the chemist, or what-not, they must be adequately remunerated. The public has never connected the necessity of money with the humanitarian ideas and principles of the medical profession. Taxes are levied; a two million dollar bridge is built across the Ohio River to transport automobiles; a railroad bridge is built at the expense of several millions to transport passengers and freight. The state makes levies for the bridge; the railroad charges for these transportations, but the medical profession must render its services without the slightest thought as to remuneration. The public does not deem it necessary to include medical care in their budget. The medical profession has actually been legislated against. Take the Kentucky Workmen's Compensation Act, for instance. They will mortgage their home to buy an automobile. How many have mortgaged their homes to pay hospital and doctors' fees? The few that have, broadcast it from ocean to ocean, but how many have broadcast the fact that they have mortgaged their home to acquire a car?

We must change this psychology in the minds of the public, otherwise the cost of medical care will be a bone of contention and in the near future will appear as one of the planks in the platform of our local and national politicians. The most sacred and valuable thing on this terrestrial globe is human life, and this is one thing on which the people of our nation have placed the lowest value and have done less to provide for than in any other one thing in our national existence.

Allow us to call your attention to the report of the Committee on Medical Economics which will be presented by the Chairman, Dr. R. Emerson Smith.

### Report of Committee on Medical Ethics

At the meeting of the House of Delegates at Bowling Green we suggested that the President appoint a committee to investigate the methods used in the State of Virginia by the association to collect medical fees. We again make the same suggestion.

We will reiterate some of the recommendations which have appeared on the floor of the House of Delegates from year to year, and outline the following recommendations:

1. An effort should be made to determine the incomes of physicians in Kentucky.

2. The people of Kentucky should be educated to budget their sicknesses so that the expense of same to a large extent might be anticipated. This recommendation would include various health insurance and hospitalization plans.

3. Government aid should be provided for medical fees, drugs, supplies and hospitalization in much the same way that food, fuel, clothes, housing and so forth are provided at present for indigent people.

4. Some effort might well be made to codify or make uniform physicians' charges.

5. An effort should be made to have legislation provided which would give doctors' bill a prior lien.

6. Attention of the physicians in Kentucky should be called to the existing laws on the subject of privileged communications.

7. Councilors should be encouraged to develop district and county committees on medical economics to study conditions in their communities.

8. Programs on the subject of medical economics should be fostered and encouraged in county, district and state society meetings.

9. Investigation of county health departments with special attention to work done on non-indigent patients.

10. Investigation of State Board of Health Laboratory activities in competition to private laboratories in the state.

11. That some method be devised by which the physician, nurse and hospital may receive a just remuneration for services rendered and that the payment of this fee shall be direct from the insurance company to the individuals concerned and the patient having nothing to do with the collection in payment of said fees.

These recommendations, we feel, should be made a part of the activities of the coming year of the Medical Association of Kentucky.

We feel that there is nothing that affects the Kentucky State Medical Association so vitally in this period of transition and demands the united effort on the part of all of its members as medical economics, which is the very cornerstone of our existence.

Our recommendations are as follows:

The Committee on Medical Economics recommends:

1. That medical care be considered as one of the basic requirements economically and that it be paid for on such a basis.

2. That the Kentucky State Medical Association secure and distribute to its members information pertaining to health insurance.

3. (a) That the Committee on Medical Economics of the Kentucky State Medical Association be made a permanent committee consisting of twelve members, a chairman and one member for each district.

(b) That this Committee be appointed by the President (after conference with the district councilors when possible) and with the approval of the House of Delegates.

(c) That the continuity of the work of this committee be guaranteed by the appointment (after the year 1934) of six men annually, naming one man from each of the odd numbered districts, 1, 3, 5, 7, 9 and 11 in odd years, and one man from each of the even numbered districts, 2, 4, 6, 8, 10, as well as a chairman, in even years.

(d) The chairman or any member of this committee may be appointed to succeed himself.

4. That Councilors be requested to arrange for the appointment of medical economics committees of county medical societies wherever the formation of such committees seems practicable and advisable.

5. That the program committees of state, district and county organizations give serious consideration to a medical economics program at least once annually and oftener when circumstances warrant.

6. That the House of Delegates express disapproval of the present method of medical care for people of Kentucky on Federal Emergency Relief, provided, however, that the final decision as to whether members of a county medical society shall cooperate with governmental agencies or not shall be determined by such societies.

7. That the House of Delegates of the Kentucky State Medical Association concur in the action of the House of Delegates of the American Medical Association in its disapproval of health insurance and state medicine.

8. That any modification of the traditional methods of medical practice shall conform to the ten principles adopted by the House of Delegates of the American Medical Association at Cleveland in 1934.

9. That the new Committee on Medical Economics for 1934-35 be instructed to study all economic subjects which have a bearing on the practice of medicine in Kentucky (such as the medical lien law, the glazed glass law, etc.) and report recommendations at the annual meeting in 1935. That such matters then be referred to the Committee on Public Relations for presentation at the next meeting of the Kentucky State Legislature and their adoption urged.

You understand there is no meeting of the Legislature before our next meeting and therefore we didn't think it necessary to report definite laws to present to the state.

10. That an amendment to the By-Laws of this organization be effected providing for a permanent state Committee on Medical Economics.

R. Emerson Smith, Chairman
W. B. Atkinson
A. C. McCarty
John H. Blackburn

Report drafted with advice of Dr. Leland of the Medical Economics Department, American Medical Association, Chicago, and Dr. Virgil Simpson, Chairman, Jefferson County Medical Society Committee on Medical Economics, and approval of Dr. Martin, President, and Dr. McCormack, Secretary, Kentucky State Medical Association.

S. C. SMITH, Ashland: I move the adoption.

SECRETARY MCCORMACK: I would like to ask unanimous consent that the By-Laws be waived and this report of the committee be formulated in the shape of an amendment

to the By-Laws to provide for the Committee on Medical Economies. You will recall that at the reorganization meeting of the American Medical Association, the president, then Dr. C. A. L. Reed of Cincinnati, ruled that the appointment of a committee for the consideration of the subject of amendment to the By-Laws was sufficient notice and that formal notice could be waived by the unanimous consent of the House of Delegates.

The motion was seconded.

PRESIDENT HOWARD: Every man in favor of that stand up.

The motion was carried unanimously.

SECRETARY MCCORMACK: I would like to move that the Committee on Medical Economics, when appointed, seek a conference with the Administrator of the Kentucky Relief Administration, with a view to composing and equalizing the matters over which he has control in such a way as to conform to the usages of the profession.

The motion was seconded and carried.

PRESIDENT HOWARD: Report of the Committee on the Journal.

W. BARNETT OWEN, Louisville: If you noticed in your last JOURNAL of September there was a detailed report which covers comparative estimates outlining the situation of the JOURNAL in 1933 and 1934.

From this you will learn that the income has been decreased, and in spite of that fact the reading matter has increased. Now of course you can readily understand that it takes money to run the JOURNAL.

I have investigated other states and I find that in states of equal size with Kentucky the journals are not as good as ours, and our JOURNAL is being run economically and efficiently.

There are only two points that I could make, and the first is when we get more money and secondly when we have a better type of papers our JOURNAL will naturally improve correspondingly. I find no reason for criticism of the management or the running of the JOURNAL. It is run the best of any state its size, and we are all proud of our JOURNAL. I hope that they will continue to improve as they have done in the past.

PRESIDENT HOWARD: That is a fine report. Do you all accept it? (Accepted unanimously.)

SECRETARY MCCORMACK: Report of the Business Manager. I think that has been published.

Dr. Hall, of the Auditing Committee, reports that he find the books all right.

PRESIDENT HOWARD: Committee on Exhibits.

SECRETARY MCCORMACK: I move that the thanks of the Association be extended to the committee composed of Doctor Virgil Simpson. Charles H. Tye, A. P. Markendorf and T. W. Hoskins representing the Pharmacopeal and scientific Pharmaceutical exhibit, and thank Doctor Virgil Simpson for his exhibit in Physiotherapy.

These are two of the best exhibits that have ever been presented at this Association. I think they have been of vast interest. They are practically post-graduate courses and we owe these gentlemen our thanks.

I want to call the attention of the Association to the close cooperation we are now having with the dental association, the state pharmaceutical association and the state nursing association, and especially urge that joint programs with the dentists and pharmacists be arranged. The pharmacists need our help tremendously. Of course, during the recent prohibition regime a great many of them became saloon-keepers. The reputable members of the profession are anxious to get rid of the additions they made to their organization during that time and let these bartenders go back to their regular jobs. To that end, they need our assistance. We need theirs in many respects.

I believe a motion of this sort will be of advantage. I make a motion to that effect.

W. I. HUME, Louisville: I would like to second the motion and say that Mr. Markendorf and the other outstanding druggists of Louisville are cooperating to the best of their ability. We have arranged a combined meeting of the doctors and druggists for this fall, and we think it is going to help.

The motion was carried.

C. A. VANCE: Dr. Simpson asked me to get the consent of the Council to present to the House of Delegates his scheme for this year. We haven't had a meeting of the Council so I couldn't get it before them, but his scheme is this: He wishes the House of Delegates to give the Council consent to have meetings in each district present his physiotherapy program. I would like to get the consent of the delegates for that.

SECRETARY MCCORMACK: I move that be done.

The motion was seconded and carried.

PRESIDENT HOWARD: Report of Health Problems In Education.

HEALTH PROBLEMS IN EDUCATION

In this report your committee has considered some of the problems which have to do with both the dissemination and application, in the schools, of knowledge pertaining to the health of both the individual and the community. What, if any, should be the relation of the field of medicine to the field of education? Should the school concern itself either with the teaching of health or with

the health of the students? Should medicine concern itself either with the health of the students in the schools or with the schools as a medium for the dissemination of knowledge of health and disease.

While the chief purpose of the school is the development mentally and physically of the individual yet they, in so doing, incorporate into the lives of the students useful knowledge, practices and attitudes not the least of which should pertain to health and disease. While medicine concerns itself with the treatment and prevention of disease its purpose can only be accomplished in direct proportion to the enlightenment of the people concerning health and disease. There is no better illustration of this fact than in India or China where even modern medical practices, alone, may not reduce an infant mortality of 350 or a birth rate of 50, nor lengthen the span of life beyond twenty-five years; while, at the other extreme, as Sweden and Denmark, the infant mortality is 30, the birth rate 10-12 and longivity 60+. Medicine and education then are both concerned in these problems.

Medicine, through practicing physicians, health departments, schools and the press is disseminating the newer knowledge of health and disease and especially the preventable diseases, but of all these the teacher in the school probably stands in the key position. She is in a better position than any other agency to incorporate into the lives of all the children useful teaching and practices. Education is aware of the health problems in the schools and is disseminating and practicing the science of disease prevention and health promotion.

The school health program is then a joint program of medicine and education—of the physician and the teacher. It involves the school, the health department, the home and the family physician, and neither can play the role of the other. The health department is to the school what the family physician is to the home. The health officer can have no more influence in the school without the cooperation of the teacher than can the physician in the family without the cooperation of the parents.

The school physician's part—in most instances the health officer's—is many and varied. He is concerned with the sanitation, the heating, lighting and ventilating and the seating arrangements of the school plant; he is concerned with the water supply and the sewage disposal. Then the physician makes and records a fairly comprehensive health survey of each individual student which is kept up from year to year. This survey record includes a history of diseases and immunizations, information of health habits and practices and a continuous record of the growth of the student. The survey includes an examination of the student for physical defects and recommendation for correction. The record of this health survey for each student is made in duplicate and used by both teacher and health officer. In addition, not the least of the health officer's duties is the protection of the school against communicable diseases. In the well ordered community the health officer's duty should end there. The teacher and the nurse would see to it that the parents took the child to the family physician for the necessary service and advice. But, unfortunately there are those in every community who cannot secure the services of a physician and it is incumbent on the health officer to arrange for these services without cost to the parent. In most communities this can be done but in some it may be necessary for the health officer to render such service as he may.

The teacher's part in the school health program is a new and difficult role for her. She should have sufficient knowledge of health and disease to be aware of the health problems presented by the individuals and the group in the school; she should make these problems a living part of the school activities. The teacher is concerned with the health problems presented by each individual student, and the record of the health survey on her desk is of great assistance in keeping these problems before her. From this record she derives the material for much of the school activities. Thoroughly alive to the problems presented she carries them to the students and the parents. While the correction of health evils in the schools is in itself to be greatly desired, and is the chief purpose of the health officer, the educational value of solving the problem by the school is of even greater value. The role of the teacher then is to take the health problems as revealed by work of the health department and make them real living problems in the school.

Her training should have been such that she can read the health record of the student compiled by the health department and grasp the story that it tells. What training should she have had to make her aware of the health problems about her and at the same time make the knowledge necessary for their solution a part of the useful knowledge she imparts to them? How can she make health a living part of the school? The teachers who are able to do these things have had some grounding in the basic science. They have had some grounding of the medical sciences with as much as possible of the technical filtered out, and finally they have

acquired in practice in a school where health is a living thing the methods and the grasp of the problems. Few teachers have had such training because of the difficulty in simplifying, in filtering out the technical, in translating as highly technical and complicated a science as medicine. This is one of the health problems in education.

To expect the full value from health education not only should the training of the teacher be adequate, but some place for health education should be found in the educational system for the benefit of teachers in service.

J. S. Chambers, Chairman.

Upon motion, duly seconded, the report was approved.

PRESIDENT HOWARD: Report of McDowell Memorial, C. C. Howard, Glasgow.

PRESIDENT HOWARD: We are trying to get the old building, boys, and it is pitiful the way it looks. Have you driven by Danville and looked at the old McDowell home? It is going to pieces. It is a negro barber shop now. We are going to put up this monument; you fellows put that over for me, and I thank you. I hate to be pulling you for a little money but I had to get a dollar out of you to make you all a part of it, you see. That is your partnership fee. We are going to unveil that monument about next June.

If we could get that old building we would move it over and put it behind that. We have control of that lot there for the monument. It would be a great shrine. Then we coud put the old tables and the old instruments there and reproduce the whole thing. That is just a thing in my mind. I am working on it, I haven't gotten it yet. but I just want you fellows to think it over and help in any way you can. I hope we can get it. It has been tied up in such a way that we have never been able to get the property, buy it or any way. But there has been a death or two, and sometimes a death in the community helps, so we may finally get it. I am going to try.

Here is a telegram I want to read to you: Kentucky State Medical Society:

We cordially invite the State Medical Society and Auxiliary to be our guests at luncheon at 12:30 at the opening of the Cumberland Falls State Park, October 6.

Mrs. Emma Cromwell,
Director of State Parks.

I know you all appreciate that. I will write her a letter and tell her you did. If any of you go around, tell her you are there.

SECRETARY MCCORMACK: I have in my pocket $216.01 collected at the meeting the other night, and subsequent donations, for the Jane Todd Crawford Memorial. I still have my pocket open.

PRESIDENT HOWARD: Committee on Hospital Standardization.

W. B. MOORE, Cynthiana: I have Dr. Daugherty's report.

The Committe on Standardization of Hospitals begs to report to your honorable body that it is heartily in favor of the standardization of all hospitals, wherever located, both large and small.

This great work has done a great deal of good and no harm that we know of. It requires effort on the part of all concerned in the welfare of hospitals, doctors and patient as well as the public, but the effort is worthwhile and inures to the benefit of all that make the grade required, and is the only stimulus to a worthwhile status so far known to us.

Very respectfully submitted,
C. G. Daugherty, Chairman
W. B. Moore
C. C. Howard

GEORGE W. BUSHONG: I move we accept the report.

The motion was seconded and carried.

V. A. STILLEY, Benton: This package is from the Woman's Auxiliary to the Kentucky State Medical Association. It is a history, 182 biographies, three photographs. Most all of these are not included in Dr. Abell's presidential address, "A Retrospect of Surgery in Kentucky," and the "Heritage of Kentucky in Medicine," nor in Dr. J. N. McCormack's "Medical Pioneers of Kentucky" and "History of the Members of the Southwest Medical Association" by Drs. J. R. Coleman and R. H. Ocker.

PRESIDENT HOWARD: We will now hear the Report of the Cancer Committee.

REPORT OF CANCER COMMITTEE

During the year of 1934 the subject of "Uterine and Cervical Malignancies," was through the aid of the American Society for the Control of Cancer presented throughout all sections of the State. There were six joint meetings, where from three to six counties were represented. The total number of counties at which the subject was presented was 42. At many of the meetings the physicians of the counties and also the laity were present. We believe that the presence of the laity at these meetings is a distinct advantage in that the subject is presented before the very people, whom we are attempting to teach the value of early diagnosis and treatment.

We feel that the work during the past year was a distinct step forward over that of 1933. More doctors were reached and

the state was more widely covered. Following is a list of the counties which were represented in this campaign:

| | |
|---|---|
| Pulaski | Letcher |
| McCreary | Leslie |
| Wayne | Knott |
| Boyle | Fleming |
| Garrard | Franklin |
| Marion | Casey |
| Washington | Henderson |
| Anderson | Union |
| Mercer | Webster |
| Woodford | McLean |
| Jessamine | Carroll |
| Bourbon | Henry |
| Harlan | Owen |
| Fulton | Shelby |
| Calloway | Oldham |
| Graves | Trimble |
| Hickman | Gallatin |
| Carlisle | Grant |
| Ballard | Mason |
| McCracken | Boyd |
| Simpson | Greenup |
| Allen | Taylor |
| Perry | |

Your Committee requests that you empower us to continue this work and it is our plan next year to present with your permission the subjects of malignancy of the lip, mouth and tongue.

Respectfully submitted,
L. Wallace Frank, Chairman.

SECRETARY MCCORMACK: I have the following report of the Committee on Workmen's Compensation Law from Frank Strickler, Chairman, who could not be here.

The Committee on Workmen's Compensation Law reports that to date there have been no changes in the compensation laws pertaining to the fees for doctors, nurses and hospitals. The same fee schedules are still in force, the same pernicious practice of proration of doctors, nurses and hospital bills (thereby necessitating the loss of thousands of dollars per year to the medical profession and allied professions in the State of Kentucky) is still carried on.

The compensation law now in force in Kentucky as compared to that in force in other states suffers deplorably by comparison.

The Committee recommends that the State Medical Association and the State Board of Health make a concerted effort to have these laws changed, for in these times of depression and decreased remuneration to the medical profession, it becomes more and more important that the profession protect itself from the sharp practice of certain insurance companies. It is only by the combined efforts of the State Medical Association and the Kentucky State Board of Health that these laws can be changed and conditions remedied.

Frank P. Strickler, Chairman
C. G. Forsee.

I move its adoption.

The motion was seconded and carried.

The following report of the Committee on Physical Therapy, Virgil Simpson, Louisville, Chairman:

A Council on Physical Therapy has been set up by the House of Delegates of the American Medical Association.

Nearly $11,000 were spent on the activities of this Council last year. The work was sorely needed. The producers of physical therapy apparatus, sensing the future of this field of therapy, entered into a campaign of high pressure salesmanship and the claims for positive results rivaled those of patent medicine in the gay nineties. Clinics and courses of instruction were held over the country by salaried physicists or physicians. The purported object of the clinics was instruction in technic and dissemination of information concerning the modus operandi; as a matter of fact, the chief object was sales promotion.

Undesirable as some of the phases of this propaganda were, it did have an indirect effect in stimulation of the interest of the profession in an important field of therapeutics. Physicians equipped themselves with apparatus; hospitals installed departments of physiotherapy; and out of it came to the profession a realization that a mass of misinformation and even error, together with some valuable contributions to a scientific understanding of uses and limitations of physiotherapy, had been collected.

It remained, then, for some agency with authority, backed by sufficient funds, to satisfactorily survey the whole field, glean the worthwhile from the spectacular or useless, and place the resultant data in the hands of the busy doctor and the interested specialist. The logical agency to do that job was the A. M. A. and through the Council on Physical Therapy it is doing it. It has not only reviewed the literature and compiled the group experience of the physicians doing this work, but it also invited research by physicists and physicians with a knowledge of physics. Out of that task, not yet completed, has come an evaluation of methods used in physical therapy; "Regulations to govern Advertising of Ultra-Violet Generators to the Profession" (1932); Acceptance of Sun Lamps (1932); The Present Status of Light Therapy (1932); Physical Therapy in Dermatology; The Dosage of Ultra-Violet Radiation in Infants with

Tetany (1930); An Apparatus for Moss Treatment of Children with Ultra-Violet Rays (1929); Irradiation of Milk by the Carbon Arc Lamp (1932); A Column in the Journal giving reports of studies of work, of rulings, of regulations.

A Journal is now issued regularly called the Archives of Physical Therapy and the best medical journals carry articles on physical therapy with regularity. Dependable texts are appearing frequently and advertisers have toned the luridity of their literature to a helpful glow. Kolmer in the foreword in Krusen's "Light Therapy" (1933) wrote, "Light Therapy offers still greater possibilities when we have learned more about the exact action of various wave lengths and how to produce limited ranges with them in proper standard doses."

The purpose of all this is that something is known about physiotherapy, that much is in the process of determination and more remains unfathomed; that there are now dependable sources from which accepted information may be derived.

The Council on Physical Therapy has also studied high frequency apparatus. There had been little work done on the therapeutic effects of this kind of heat. Work here had to begin almost at scratch. The Council had published "Diathermy — A Preliminary Statement to Acceptance of Diathermy Apparatus" and "The Examination of Diathermy Machines for Local Diathermy Treatments and Requirements for Acceptance of These Machines."

The Council's study of resuscitation equipment, oxygen tents, etc, so that a physician or a hospital may satisfactorily investigate such apparatus before purchasing shows that 68 devices and apparati have been investigated and studied and others are being studied. Before an electrical apparatus is accepted it is thoroughly tested for insulation, safety and efficiency. When refused the stamp of acceptance, most manufacturers have met the rules of the Council and corrected the deficiences noted.

The purpose of the creation of the Committee on Physio-Therapy of this House is to aid in the promotion of sound education in the field of therapeutics. One of the essentials in attaining this end is to study and help formulate the essentials of educational requirements for schools of physical therapy and occupational therapy technicians; another is to cooperate with hospitals in the state in setting up the essentials for physical therapy departments and adequate training of technicians; a third is to aid manufacturers in the accumulating of dependable evidence as to the value of products; fourth, to help prepare scientific editorials or papers for the Journal; fifth, to help plan meetings for post graduate instruction for the practicing physician.

Finally, the committee would stress (a) that the need in Kentucky is not more physical equipment in physicians' offices or in hospitals, but (b) more knowledge of the science of physics, a better evaluation of the indications for the various modalities, a keener realization of their limitations and a better grounding in technique.

Scott Breckinridge
Wm. T. Briggs
W. M. Brown
Robert L. Biltz
H. C. Herrmann
D. Y. Keith
Orville Miller
Lee Palmer
Fred Rankin
Winston U. Rutledge
Virgil E. Simpson, Chairman.

SECRETARY MCCORMACK: I move it be adopted.

The motion was seconded and carried.

C. A. VANCE: The Council reports the following accounts, and I move that they be paid. Carried.

1934

Sept. 29—Voucher Check No. 1 ..... $171.70
A. T. McCORMACK, M. M. D., Louisville
To September salary, Secretary ..... 135.00
To expense to Chicago ..... 36.70
171.70
Approved by Council and Ordered Paid by House of Delegates.

Sept. 29—Voucher Check No. 2 ..... $107.89
L. H. SOUTH, M. D., Louisville
To September salary, Business Manager ..... 90.00
To expenses to Crab Orchard, July 31st and August 7th, and to Bowling Green, August 10th and 11th ..... 17.89
107.89
Approved by Council and Ordered Paid by House of Delegates.

Sept. 29—Voucher Check No. 3 ..... $90.00
J. F. BLACKERBY, Louisville
To September services rendered Committee on Public Policy ..... 90.00
Approved by Council and Ordered Paid by House of Delegates.

Sept. 29—Voucher Check No. 4 ..... 75.00
ELVA GRANT, Louisville
To September salary, Bookkeeper ..... 75.00
Approved by Council and Ordered Paid by House of Delegates

Sept. 29—Voucher Check No. 5 ..... $59.50
B. P. EUBANK, Bowling Green
To auditing accounts of Marshall McDowell, M. D., Treasurer, and A. T. McCormack, M. D., Secretary, Kentucky State Medical Association, and Mrs. C. H. Krieger, Treasurer, and Mrs. Peter Guntermann, Business Manager, Woman's Auxiliary, for the period September 1, 1933 through August 31, 1934 ..... 50.00
To traveling expenses ..... 9.50
59.50
Approved by Council and Ordered Paid by House of Delegates.

Sept. 29—Voucher Check No. 6 ..... 1.08
J. B. LUKINS, M. D., Louisville
To long distance call to Lexington to Dr. P. L. McClure ..... 1.08
Approved by Council and Ordered Paid by House of Delegaes.

Sept. 29—Voucher Check No. 7 ..... 19.97
BUSH-KREBS CO., Louisville
To 4 cuts ..... 19.97
Approved by Council and Ordered Paid by House of Delegates.

Sept. 29—Voucher Check No. 8 ..... 40.01
F. & V. MANUFACTURING CO., East Providence, R. I.
To 300 Bangles lettering Harlan 1934 at 13 1-4c ..... 39.75
Insured mail ..... .26
40.01
Approved by Council and Ordered Paid by House of Delegates.

Sept. 29—Voucher Check No. 9 ..... 33.16
COURIER-JOURNAL JOB PRINTING CO., Louisville
To 2,500 Inserts of Dr. C. C. Howard's picture for annual number ..... 31.60
Sales tax ..... .95
Postage and insurance ..... .61
33.16
Approved by Council and Ordered Paid by House of Delegates.

Sept. 29—Voucher Check No. 10 ..... 6.44
MEFFERT EQUIPMENT CO., Louisville
To 1 box White Envelopes ..... 1.25
To 2,500 4x6 Plain Cards at 2.00 per M ..... 5.00
6.25
Sales tax ..... .19
6.44
Approved by Council and Ordered Paid by House of Delegates.

Sept. 29—Voucher Check No. 11 ..... 4.12
RAILWAY EXPRESS AGENCY, Louisville
To express to Bowling Green, 7-14 and 8-16, 16-34 ..... 1.10
To express from Cynthiana, 8-5-34 ..... .40
To express from Bowling Green, 7-6, 7, 8, 10 and 31-34 ..... 2.62
4.12
Approved by Council and Ordered Paid by House of Delegates.

Sept. 29—Voucher Check No. 12 ..... 23.18
LOUISVILLE POSTMASTER, Louisville
To postage for July and August ..... 23.18
Approved by Council and Ordered Paid by House of Delegates.

Sept. 29—Voucher Check No. 13 ..... 6.00
KLEIN BROTHERS, Louisville
To repairing 1 fan ..... 6.00
Approved by Council and Ordered Paid by House of Delegates.

Sept. 29—Voucher Check No. 14 ..... 2.94
THE STEWART DRY GOODS CO., Louisville
To 1 Mat ..... .25
To 2 Frames ..... 2.60
2.85
Sales Tax ..... .09
2.94
Approved by Council and Ordered Paid by House of Delegates.

Sept. 29—Voucher Check No. 15 ..... 4.40
SOUTHERN BELL TELEPHONE & TELEGRAPH CO., Louisville
To long distance calls, 8-11, 13, 20 and 23-34 ..... 4.40
Approved by Council and Ordered Paid by House of Delegates.

Sept. 29—Voucher Check No. 16 ..... 409.00
LOUISVILLE POSTMASTER, Louisville
To 5 M No. 5 2c Envelopes ..... 109.80
To 5 M No. 5 3c Envelopes ..... 159.80
To 2 1-2 M No. 8 2c Envelopes ..... 57.20
To 2 1-2 M No. 8 3c Envelopes ..... 82.20
409.00
Approved by Council and Ordered Paid by House of Delegates.

Sept. 29—Voucher Check No. 17 ..... 15.72
E. H. ROEDERER, Louisville
To 20 Badges, White, Past President at 6c ..... 1.20
To 200 Badges, Blue, Delegate at 6c ..... 12.00
To 63 Badges, Purple (Ribbon Furnished), Councilor at 4c ..... 2.52
15.72
Approved by Council and Ordered Paid by House of Delegates.

Sept. 29—Voucher Check No. 18 ..... 89.15
CHARLES A. VANCE, M. D., Lexington
To expense as Chairman of Council for year, as follows:
Stamps and telephone calls ..... 13.95
Councilor trips and meetings ..... 75.20
89.15
Approved by Council and Ordered Paid by House of Delegates.

| | | | | | |
|---|---|---|---|---|---|
| Sept. 29—Voucher Check No. 19 | | | | | 829.57 |
| TIMES JOURNAL PUBLISHING CO., Bowling Green | | | | | |
| To 2500 September Issue—84 Pages | | | 575.00 | | |
| To 74,592 Ems in 6 pt. | | | 74.50 | | |
| To Inserts | | | 5.00 | | |
| To Inserts Scored | | | 8.50 | | |
| To Envelopes | | | 15.00 | | |
| To Printing Envelopes | | | 2.30 | | |
| | | | 680.30 | | |
| Sales tax | | | 20.41 | | |
| | | | 700.71 | | |
| Less credit by Check No. 143 dated 8-31-34 | | | 450.00 | | |
| | | | | 250.71 | |
| To 2100 October Issue—80 Pages | | | 535.00 | | |
| To Envelopes | | | 15.00 | | |
| To Printing Envelopes | | | 2.50 | | |
| | | | 552.50 | | |
| To 1500 Letterheads-Secretary | | 5.50 | | | |
| To 1000 Address Cards | | 4.00 | 9.50 | | |
| | | | 562.00 | | |
| Sales tax | | | 16.86 | | |
| | | | | 578.86 | |
| | | | | 829.57 | |
| Approved by Council and Ordered Paid by House of Delegates. | | | | | |
| Sept. 29—Voucher Check No. 20 | | | | | 30.90 |
| TIMES JOURNAL PUBLISHING CO., Bowling Green | | | | | |
| To 500—12 Page Programs | | | | 30.00 | |
| Sales tax | | | | .90 | |
| | | | | 30.90 | |
| Approved by Council and Ordered Paid by House of Delegates. | | | | | |
| Sept. 29—Voucher Check No. 21 | | | | | 10.00 |
| THE CODE AUTHORITY FOR PERIODICAL PUBLISHING AND PRINTING INDUSTRY, New York City | | | | | |
| To assessment for period, February 26, 1934 to February 25, 1935 inclusive | | | | 10.00 | |
| Approved by Council and Ordered Paid by House of Delegates. | | | | | |
| Oct. 31—Voucher Check No. 22 | | | | | 182.46 |
| A. T. McCORMACK, M. D., Louisville | | | | | |
| To October salary, Secretary | | | | 135.00 | |
| To expense to State meeting | | | | 47.46 | |
| | | | | 182.46 | |
| Approved by Council and Ordered Paid by House of Delegates. | | | | | |
| Oct. 31—Voucher Check No. 23 | | | | | 109.30 |
| L. H. SOUTH, M. D., Louisville | | | | | |
| To October salary, Business Manager | | | | 90.00 | |
| To expense to State Meeting | | | | 19.30 | |
| | | | | 109.30 | |
| Approved by Council and Ordered Paid by House of Delegates. | | | | | |
| Oct. 31—Voucher Check No. 24 | | | | | 90.00 |
| J. F. BLACKERBY, Louisville | | | | | |
| To October services rendered Committee on Public Policy | | | | 90.00 | |
| Approved by Council and Ordered Paid by House of Delegates. | | | | | |
| Oct. 31—Voucher Check No. 25 | | | | | 75.00 |
| ELVA GRANT, Louisville | | | | | |
| To October salary, Bookkeepper | | | | 75.00 | |
| Approved by Council and Ordered Paid by House of Delegates. | | | | | |
| Oct. 31—Voucher Check No. 26 | | | | | 62.20 |
| MAYME SULLIVAN, Louisville | | | | | |
| To expense to State Meeting | | | | 37.20 | |
| To services rendered at State Meeting | | | | 25.00 | |
| | | | | 62.20 | |
| Approved by Council and Ordered Paid by House of Delegates. | | | | | |
| Oct. 31—Voucher Check No. 27 | | | | | 29.94 |
| RUTH FLAGG, Louisville | | | | | |
| To expense to State Meeting | | | | 4.94 | |
| To services rendered at State Meeting | | | | 25.00 | |
| | | | | 29.94 | |
| Approved by Council and Ordered Paid by House of Delegates. | | | | | |
| Oct. 31—Voucher Check No. 28 | | | | | 28.60 |
| MABELLE YOUNG, Louisville | | | | | |
| To expense to State Meeting | | | | 3.60 | |
| To services rendered at State Meeting | | | | 25.00 | |
| | | | | 28.60 | |
| Approved by Council and Ordered Paid by House of Delegates. | | | | | |
| Oct. 31—Voucher Check No. 29 | | | | | 3.42 |
| JOHN W. KELLEY, Louisville | | | | | |
| To expenses to Bowling Green and return, September 24th, in connection with State Meeting Program | | | | 3.42 | |
| Approved by Council and Ordered Paid by House of Delegates. | | | | | |
| Oct. 31—Voucher Check No. 30 | | | | | 15.00 |
| J. B. LUKINS, M. D., Louisville | | | | | |
| To stamps, stationary, carbon paper and folders used as Chairman of Medico-Legal Committee | | | | 15.00 | |
| Approved by Council and Ordered Paid by House of Delegates. | | | | | |
| Oct. 31—Voucher Check No. 31 | | | | | 25.00 |
| W. D. HAGGARD, M. D., Nashville, Tennessee | | | | | |
| To expense as Guest Speaker at State Meeting | | | | 25.00 | |
| Approved by Council and Ordered Paid by House of Delegates. | | | | | |

Oct. 31—Voucher Check No. 32 ..... 16.60
D. M. GRIFFITH, M. D., Owensboro
To expense as Councilor, Second District ..... 16.60
Approved by Council and Ordered Paid by House of Delegates.

Oct. 31—Voucher Check No. 33 ..... 100.00
LAWRENCE YEARY, Financial Secretary, Harlan
To use of Methodist Episcopal Church, Harlan, for State Meeting ..... 100.00
Approved by Council and Ordered Paid by House of Delegates.

Oct. 31—Voucher Check No. 34 ..... 60.00
MRS. J. M. ALVERSON, Harlan
To luncheon at State Meeting, 80 plates at 75c ..... 60.00
Approved by Council and Ordered Paid by House of Delegates.

Oct. 31—Voucher Check No. 35 ..... 53.56
THE LEWALLEN HOTEL CO., Harlan
To room and meals for A. T. McCormack, M. D., Mayme Sullivan, Ruth Flagg and Mabelle Young, 9-30-10-4-34 ..... 53.56
Approved by Council and Ordered Paid by House of Delegates.

Oct. 31—Voucher Check No. 36 ..... 4.58
RAILWAY EXPRESS AGENCY, Louisville
To express from Bowling Green, 9-4, 7, 15, 21 and 29-54 ..... 3.62
To express to Bowling Green, 9-18-34 ..... .96
4.58
Approved by Council and Ordered Paid by House of Delegates.

Oct. 31—Voucher Check No. 37 ..... 1.90
MEFFERT EQUIPMENT CO., Louisville
To 2 No. 548 Index Books ..... .40
To 1 gross Cedar Pencils ..... 1.50
1.90
Approved by Council and Ordered Paid by House of Delegates.

Oct. 31—Voucher Check No. 38 ..... 15.56
LOUISVILLE POSTMASTER, Louisville
To stamps for September ..... 15.56

Oct. 31—Voucher Check No. 39 ..... 39.27
V. A. STILLEY, M. D., Benton
To expense as Councilor, First District ..... 39.27
Approved by Council and Ordered Paid by House of Delegates.

Oct. 31—Voucher Check No. 40 ..... 626.54
TIMES JOURNAL PUBLISHING CO., Bowling Green
To 2150 November Issue—72 Pages ..... 486.00
To Inserts Scored ..... 8.50
To Printing Envelopes ..... 2.30
496.80
Sales tax ..... 14.90 511.70
To 500 Letterheads and 500 Envelopes, President ..... 6.00
To 300 Letterheads and 300 Envelopes, President-Elect ..... 4.50
To 15,000 Letterheads, Secretary ..... 60.00
To 15,000 Second Sheets, Secretary ..... 26.00
To 500 Letterheads and 500 Envelopes Chairman of Council .. 6.00
To 300 Letterheads and 300 Envelopes, Councilor, Fifth District 4.50
To 300 Letterheads and 300 Envelopes, Councilor, Sixth District 4.50
111.50
Sales tax ..... 3.34 114.84
626.54
Approved by Council and Ordered Paid by House of Delegates.

S. C. Smith moved that the Reports of the Council and Secretary be approved and adopted. Seconded. Carried.

SECRETARY MCCORMACK: I move we adjourn sine die.

The motion was seconded and carried, and the meeting adjourned sine die at 9:15 a. m.

A. T. MCCORMACK, Secretary.

# Kentucky Medical Journal

Published Monthly By

THE KENTUCKY MEDICAL ASSOCIATION
Incorporated

Entered as second class matter October 22, 1906, at the Postoffice at Bowling Green, Ky., under act of Congress, March 3, 1879.

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NEXT MEETING LOUISVILLE


## COUNTY SOCIETY REPORTS

**Grant County:** The regular meeting of the Grant County Medical Society was held at the Court House, Williamstown, Ky., Wednesday evening, September 19, 1934 with the following members present: Dr. H. F. Mann, J. J. Marshall, R. E. Kinsey, C. D. O'Hara, N. H. Ellis, C. M. Eckler, and Dr. S. B. Rich.

The minutes of last meeting were read and approved and usual business transacted. Dr. N. H. Ellis, was elected delegate to the Kentucky State Medical Association to be held at Harlan, Ky., October 1, 2, 3, and 4th, 1934. He was elected to fill our regular delegate's place who is unable to attend.

The topic for the evening was now taken up. This was a paper by Dr. N. H. Ellis on Syphilis. Dr. Ellis went into detail as to the appearance of the location, treatment, Abortive, Active and remote. Dr. Ellis went into the treatment from its beginning, gave valuable information from U. S. Public Health reports and in all outlined a wonderful and up-to-date treatment.

Dr. O'Hara discussed the subject with its treatment and believes every subject should be under social laws.

Dr. Kinsey brought out some very excellent thoughts in treatment during pregnancy and his thoughts were very interesting.

Dr. Marshall, Dr. Mann and Dr. C. M. Eckler entered into a general discussion of the subject all touching on the points not yet brought out. They all thought this was a very interesting and instructive meeting and congratulated Dr. Ellis on his excellent paper.

The subject for next time is Syphilis, con't., and in addition a paper on Gonorrhea by Dr. Harry F. Mann and discussion opened by Dr. C. D. O'Hara. We now adjourned to meet the third Wednesday in October at the usual hour.

C. A. ECKLER, Secretary

**Third District:** The Third District Medical Society met at the Helm Hotel, Bowling Green, on Wednesday, October 17th with thirty-five doctors present and Dr. G. Y. Graves, the President, presiding.

Dr. W. H. Neel, Bowling Green, reported a case of multiple fractures of the pelvis and spine.

Dr. G. Y. Graves, Bowling Green, reported a case of vesicovaginal fistula with operative cure

Dr. Virgil Simpson, Louisville, read a paper on the "Use of Serums and Vaccines". This paper was discussed by F. D. Reardon and in closing by Dr. Simpson.

Dr. Paul York, Glasgow, read a paper on "Hematuria". Dr. Owsley Grant, Louisville, read a paper on "Extra-Renal Symptoms of Renal Disease". These papers were discussed by Drs.

Howard and Simpson and in closing the discussion by Drs. York and Grant.

Luncheon was served in the main dining room of the Helm Hotel at the noon hour.

After lunch Dr. Milton Lewis, Nashville, read a paper on "Treatment of Eclampsia". This paper was discussed by Drs. Rutherford, Simpson and in closing the discussion by Dr. Lewis.

JOHN H. BLACKBURN, Secretary.

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**Henderson:** Henderson County Medical Society met at the Henderson Hospital, November 12, 1934.

Dr. J. Leland Tanner read a paper on "Treatment of Asthma".

WALTER L. O'NAN, Secretary.

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**Fleming:** Dr. James Barbee O'Bannon, 70, retired Fleming county health officer, died October 23 at his home in Mt. Carmel following a long illness.

Dr. O'Bannon was widely known throughout Fleming county. He had been a practicing physician in Mt. Carmel for a number of years and, until his retirement several months ago due to ill health, served as Fleming county health officer. He also was secretary of the Fleming county medical society.

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## NEWS ITEMS

Dr. E. M. Ewers, of Somerset, reports that a man by the name of W. H. Fried, representing himself as the Agent of the American Aid Society, at Willow Hill, Illinois, solicited him for an appointment as agent for "free patients." He appeared to have the names of about eighty physicians over the State when he solicited Dr. Ewers. Investigation shows that the American Aid Society does not hold a license to do business in Kentucky and neither it nor Mr. Fried is authorized to transact business in Kentucky. The Insurance Department of the State of Kentucky states that the policies of the American Aid Society are considered by it to be without value. Before physicians accept such glowing opportunities as are presented by this outfit, they should carefully investigate them so as not to lend their names to those who are violating the law.

---

The American Association for the Study of Goiter again offers the Van Meter Prize Award of $300 and two honorable mentions for the best essays on the subject of goiter provided they meet the standards of the award committee. The essays should be based on original research work on the subject of goiter, preferably its basic cause. The prize essay or its abridgement is to be presented at the annual meeting of the Association to be held in Salt Lake City, Utah, in June 1935.

Competing manuscripts should be in the hands of the Corresponding Secretary, W. Blair Mosser, M. D., Kane, Pa., not later than April 1st, 1935.

The first prize of $305 for the 1934 meeting was awarded to M. A. B. Brazier, Ph. D., B. Sc., London, England, for her essay "The Impedance Angle Test for Thyrotoxicosis."

First honorable mention was awarded Prof. Ugo Cerletti, Genoz, Italy, for his essay "Three Years of Experimental Research in the Etiology of Endemic Goitre."

Second honorable mention was awarded D. Roy McCullagh, M. D., Cleveland Clinic, Cleveland, Ohio, for his essay "Studies in Blood Iodine using a New Chemical Method."

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## BOOK REVIEWS

MANUAL OF THE DISEASES OF THE EYE, FOR STUDENTS AND GENERAL PRACTITIONERS, by Charles H. May, D. D., Director and Attending Surgeon, Bellevue Hospital, Consulting Ophthalmologist to Mt. Sinai Hospital to French Hospital. Formerly Chief of Clinic and Instructor in Ophthalmology, College of Physicians and Surgeons, Columbia University. Fourteenth Edition. Revised, with 376 original illustrations, including 25 plates, with 78 colored figures. William Wood and Company, Baltimore, Maryland. Price $4.00.

The author has endeavored to present a concise, practical and systematic manual for the student and the general practitioner of medicine. Its restriction in size has been accomplished by omitting extensive discussions and lengthy accounts of theories and rare conditions. The author has given the fundamental facts and has always kept in mind that the book was written for students and general practitioners. It has now reached the 14th edition.

The illustrations are original and have been inserted wherever they would be of value in elucidating the text.

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THE SURGICAL CLINICS OF NORTH AMERICA (Issued serially, one number every other month.) Volume 14, No. 3, (Mayo Clinic Number—June 1934) Octavo of 221 pages with 70 illustrations. Per Clinic year, February 1934 to December 1934. Paper, $12.00; Cloth, $16.00 net. Philadelphia and London: W. B. Saunders Company, 1934.

The Mayo Clinic volume, is always eagerly awaited for by the profession and they will experience no disappointment if this book is added to their library.

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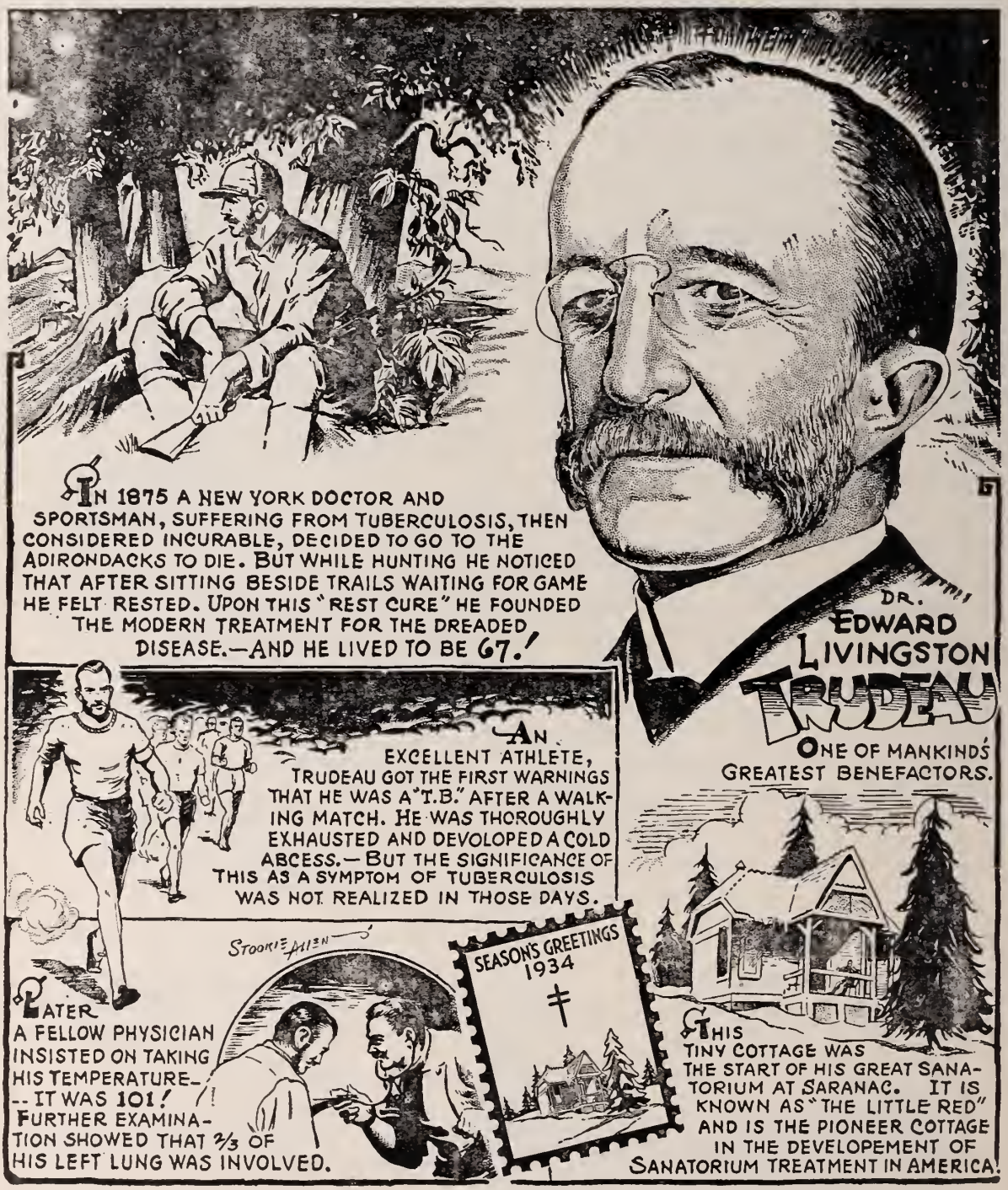
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# KENTUCKY MEDICAL JOURNAL—PART II

## WOMAN'S AUXILIARY SECTION

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## 1933-1934

ANNUAL MEETING, HARLAN, 1934

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## WOMAN'S AUXILIARY SECTION OF THE KENTUCKY MEDICAL JOURNAL

Editor—Mrs. A. T. McCormack, 1422 Brown Hotel, Louisville.

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KENTUCKY MEDICAL JOURNAL, PART II
WOMAN'S AUXILIARY SECTION

519 Tenth Street Bowling Green, Ky.

Vol. III January, 1934 No. 1

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## ATTENTION—AUXILIARY MEMBERS

It is our desire to have a complete Scrap Book this year. In order to do so clippings pertaining to Auxiliary activities in all parts of the State should be included. The only way to make this a success is for each member to cut out of her local paper any publicity relating to her Auxiliary, or to Auxiliary members, and send it direct to me at 615 Brown Building, Louisville, Ky. Duplicate will be used for the regional Scrap Book of the American Medical Auxiliary exhibited at the Annual Meeting. So, send two clippings, if you can, of each item.

Your cooperation is urgently requested and will be appreciated.

(Mrs. George A.) Jessie P. Hendon,
Chairman of Archives.

## PRESIDENT'S MESSAGE

**Mrs. B. K. Menefee, Covington.**

With the busy rush of the Christmas Holidays over, I am coming to you with the old yet ever new wish for a Happy New Year to one and all. We have been passing through strenuous times and have been troubled and distressed about conditions that have affected each of us in some way. Now—let us face about, make the best of such conditions as are before us at this time and go bravely forward.

We are told "Hope springs eternal in the human breast." Let us prove it. We have the opportunity in our Auxiliary to be of benefit to mankind and to help bring to others hope and good cheer. With the bewilderment and the chaos that have been all around us, health has been impaired to a great extent and there is urgent need of health education every where. In fulfilling this need, we have a definite place for Auxiliary activities.

I hope ere this you have consulted your Advisory Board and asked help with plans for your work. These men are able, from their experience and close contact with the people in your communities, to know what is most essential for you to do as an Auxiliary and I am sure they will be very glad to help you.

I am looking to you, my co-workers, to carry on. Through your work in your County Auxiliaries you come in contact with many organization that are only to glad to co-operate and work with you if given an opportunity and presented with an outline of procedure that is really worthwhile and great will be our satisfaction that is most needful and essential to the welfare of our own particular community, ever remembering that we must develop and put forth these plans if we expect to accomplish anything worthwhile.

I sincerely hope the work of Organization will move forward. There are so many fine women in our State who are eligible to membership in our Auxiliaries who should be working with us and, I am sure, would be if we could only find the way to interest them in our activities. Let us each strive to secure a new member for each meeting, for every new member we enlist provides a new contact by means of which we may reasonably hope to increase our scope of usefulness in our several communities.

Let us remember, too, that it is the achievement of well laid plans that will bring success to our organization, so let us strive to make them worthwhile and great will be our satisfaction when we see their consummation.

**Our advertisers want to know that you saw their offers in The Woman's Auxiliary Section. Tell them whenever you make a purchase from them.**



Mrs. B. K. Menefee, Covington, Kentucky

## WOMAN'S AUXILIARY
### to the
## KENTUCKY STATE MEDICAL ASSOCIATION

**Our Code—1933-1934**

**Mrs. B. K. Menefee, Covington, President**

1. Be guided in all State activities by our Advisory Council appointed by the Kentucky State Medical Association. Each County Auxiliary to be guided in County activities by its County Advisory Council appointed by the County Medical Society.
2. Make a thorough study of our State Medical and Health Laws from time to time, keeping abreast of developing changes.
3. Each County, wherever possible, have the following Committee Chairmen, corresponding to State and National Auxiliaries:

| | |
|---|---|
| Archives | Legislation |
| Child Health | Organization |
| Finance | Public Instruction |
| Historian | Public Relations |
| Hygeia | Radio |
| Jane Todd Crawford Memorial | Tuberculosis |

4. County Auxiliaries file copies of their own Constitution and By-Laws with the State Parliamentarian.
5. Assist in the entertainment at County, District and State Meetings and promote unity and friendship through fellowship.
6. Further the Jane Todd Crawford Memorial project whenever possible.
7. Sponsor Child Health and Child Welfare programs.
8. Contribute news and items of interest to our Quarterly Section of the Kentucky Medical Journal.
9. Make an earnest effort to increase our membership by re-enlisitng former members and securing new members.
10. Work with other organizations, wherever possible, to further the aims of the Auxiliary.
11. Co-operate promptly with National Auxiliary recommendations and keep in close touch with the Southern Auxiliary.
12. Study tuberculosis prevention and fight this disease. Let us make an earnest effort to do all in our power to fight this dread disease. There are so many simple rules for its prevention that we should pass on to those with whom we come in contact who have not had the opportunity of knowing this disease as we do. Let us try to save others from this disease by teaching them a few simple health facts. Some very excellent health rules are thus briefly outlined by the Metropolitan Life Insurance Company;—"To live, work, play, sleep and rest whenever possible in the sunshine and open air. Eat nourishing food and use pasteurized milk. Avoid overwork, late hours and all excesses which weaken the body. Keep cheerful. Go to your Doctor for a thorough health examination once a year."

### OPENING THE MEETING

At the Nelson County Auxiliary meeting the following Collect is repeated in unison, all standing, or it is read aloud by a member immediately after the President calls the meeting to order. It was used also in place of an Invocation at the Annual Luncheon of the Southern Medical Auxiliary, November 15th at Richmond.

### COLLECT

Keep us, O God, from pettiness; let us be large in thought, in word, in deed.
Let us be done with fault-finding and leave off self-seeking.
May we put away all pretense and meet each other face to face without self-pity and without prejudice.
May we never be hasty in judgment and always geneorus.
Let us take time for all things; make us grow calm, serene and gentle.
Teach us to put into action our better impulses, straight-forward and unafraid.
Grant that we may realize it is the little things that create differences; that in the big things of life we are as one.
And may we strive to touch and to know the great common woman's heart of us all; and, O Lord Good, let us not forget to be kind.

(Written for Club Women of America by Mary Stewart)

# -:- EDITORIALS -:-

## OUR ADVERTISERS

Good Cheer! God's near!

We're here! Good Cheer!

Again the Kentucky Cardinal heralds the New Year with its happy, courageous song of good cheer filled with promise of Faith, Hope and Share-ity for constructive progress throughout 1934. Welcome joyous songster and busy day laborer! Your example is an inspiration to us all. We, too, should sing joyously, thankfully, as we work for our daily food!

The Kentucky business men and women represented in our advertising pages must each keep the song of the Cardinal singing in their hearts and minds, for in all the bewildering uncertainty and economic perplexity of the autumn of 1933, they confidently, generously have determined to share their endeavors another year with the Woman's Auxiliary Section of the Kentucky Medical Journal. Auxiliary members appreciate this comradeship in their pioneer venture, now in its third year, fully conscious that this compliment and confidence belong, in reality, to their husbands, the members of the Kentucky State Medical Association, who spend themselves unsparingly at all times for the relief of those in physical and mental anguish.

Share-ity, meaning neighborliness, is not exactly a new word, but lends a revived view of that beautiful old word Charity, an interpretation understood and practiced by the Founders of our Country in their every day struggle for existence as they builded our Nation, an interpretation too completely forgotten or ignored by present day generations. But here, again, we have unmistakable evidence that this old interpretation still lives in the every-day code of our modern business people. Thank you, Messrs et Mesdames Advertisers, for your share-ity viewpoint. We will return the compliment, to the best of our ability, through our patronage of your products which we know are the best obtainable. For you and yours, we sincerely wish the Happiest, Healthiest, Most Prosperous of New Years.

## CORNELIAS AND ISABELLAS

Another year has rolled around with additional names added to the honor lists of both our Isabellas and Cornelias. Thirty different members of our State Auxiliary have written articles published in the Supplement to the Kentucky Medical Journal during the past year, which put them in the Cornelia classification. Search through your four copies of the 1933 edition and see who these talented women are and you will be even prouder than ever to claim them as friends.

And the Isabellas! They number 8, with 4 new ones added this year. Theirs has been a difficult role, this season with all the economic perplexity and uncertainty that has beset our business friends trying to adjust their affairs to new codes that make new and untried business practices imperative. But, faithfully, courageously, the Isabellas have toiled on, trudging from one possible advertiser to another, meeting with courtesy and kindly consideration, always, and with a promise for future patronage where the advertising budget does not permit immediate participation. It is a privilege and a very real education to be permitted to share in the present endeavor to swing the mechanism of our modern civilization around into the advancing step of the New Deal in which sharing plays an important part. The Isabellas this year are those whose other names are Cohen, Guntermann, Hendon, McCormack, McCoy, Rogers, Steely, Turner.

The Donars, individual members and County Auxiliaries as organized bodies, who sent in helpful contributions of One Dollar or more have increased during the year. Donations from those who can not help in any other way will be welcomed by our Business Manager.

## FOOD AND DRUGS IN CONGRESS

Your attention is called to the excellent article on the Proposed New Food and Drugs Law on page 7. Physicians, and incidently their wives, are particularly interested in this measure which concerns the health and welfare of every citizen. This proposed new law, known as the Copeland Bill because Senator Copeland, a physician, introduced it in Congress as Senate Bill 1944, was lost in the whirlpool of legislation during the last smoothering days of the session in June, 1933. On December 7th, hearing on the bill were begun in Washington and it is expected that this will be one of the first bills considered by the new Congress convening this month.

Chief among the foes of the bill are the patent medicine manufacturers; their remonstrances are loud, lengthy and lethal. This, perhaps, is one of the best arguments for the bill. Lined up with the patent medicine manufacturers are their advertising men. Tell the people the truth and the patent medicine manufacturers will lose sales. So will the manufacturers of fraudulent foods and harmful cosmetics. So will the store keeper who sells these goods to the people.

Among the instructive, although rather appalling, exhibits at A Century of Progress was

the "Chamber of Patent Medicine Horrors." One sample of its contents was an alleged diabetes cure, selling at $12.00 a bottle, and beside it a column of testimonials by persons claiming to have been cured. Besides these testimonials, in the same kind of a column, were death certificates of the individuals in question, showing each to have succumbed to the disease from which they claimed to have been cured!

Every Auxiliary member is urged to write to her Senator or Congressman and ask for a copy of this bill, S. 1944, and study it for herself, do her own thinking and then make use of her right as a citizen and write her Senator and Congressman what she wants him, as her representative, to do about it when the vote is taken.

A very readable book is Kallet and Schlink's One Hundred Million Guinea Pigs which gives in popular form the results of the study made on this subject before the bill was drafted. Even though many of the statements in this book may be exaggerations, if it assists in calling attention to the dire need for a better food and drug law, the book will have accomplished a laudable purpose.

Mrs. Sarah Vance Dugan's interesting address on this subject before the Round Table at our Annual Meeting held in Murray, September 11, 1933, was published in the Bulletin of the State Board of Health. Write for a free copy.

## BETTER FILMS COUNCIL

In many cities and towns all over the country, Better Films Councils are being organized for the purpose of studying the various problems, particularly among the youth, which have arisen in our civilization due to the influence of the motion pictures. Nobody seems to know, yet, just what it is best to do about these complexities, but at least, a beginning of serious study promises eventual light and guidance toward progress. The Parent's Magazine has carried an interesting series on this subject, beginning with the July, 1933, issue. In our Book Reviews, page 15, a taste is given of what we may find in the popular presentation, by Henry James Forman, of the four year scientific study conducted by the Payne Foundation for the Motion Picture Research Council.

## HISTORIAN'S CORNER

**Mrs. V. A. Stilley, State Historian**

### WOULD THEY?

If you could see your Ancestors
All standing in a row,
There might be some among them whom
You wouldn't care to know.
But—there's another matter, which
Requires a different view;
If you could see your Ancestors,
Would they be proud of you?

## A NEW FOOD AND DRUGS ACT

**By W. G. Campbell,**

Chief of the Food and Drug Administration, United States Department of Agriculture

The food and drugs act of June 30, 1906, was an innovation in Federal legislation. It has none the less been notably effective in the control of adulterated and misbranded foods and drugs and has been the means of correcting many of the serious conditions which led to its enactment. Conditions surrounding present-day traffic in foods and drugs are vastly different from those of 1906. Situations impossible to foresee when the original statute was drafted call for radical changes in procedure if the public and the ethical manufacturer are to be guaranteed that protection which Congress had in mind when it passed the law. That an automobile of the vintage of 1906 is an anachronism in these days of concrete highways and high speed is no reflection on the designers of the models of that early date. That the present food and drugs act is likewise an anachronism in these days of high pressure advertising and vastly increased interstate traffic in foods and drugs is no reflection on Dr. Wiley and his associates who framed the original statute. It is, in fact, remarkable that so many of the provisions contained in that law are still applicable to the control of present-day conditions.

In the course of more than a quarter of a century of enforcement the weak points of the present law have become increasingly apparent to enforcing officials as appellate court decisions have served to bound its limitations and as changes in marketing and producing technique and in the actual composition of foods and drugs have occurred. Recognition of these defects and omissions has led to repeated recommendations during the past twenty years for strengthening amendments. With the exception of the Sherley Amendment designed to give more effective control over the labeling of proprietary medicines, the net weight amendment requiring the quantity of contents to be declared on food in package form, and the McNary-Mapes Amendment authorizing the establishment of legal definitions of quality, condition and fill of container for canned foods, the amendments recommended to Congress during this period have failed of enactment. Urgent but unsuccessful recommendations have been made for amendments designed to give authority to the Secretary of Agriculture to establish legal standards for food products, to eliminate the confusing and nullifying effect of the provision relating to distinctive names, and to increase penalties to the point where their imposition will exercise a positively deterrent effect. The so-called "slack fill bill" intended to insure the consumer a full package, supported almost unanimously by the food industry, passed the

(Continued on Page 17)

# THE JANE TODD CRAWFORD MEMORIAL

## SOUTHERN MEDICAL AUXILIARY CHAIRMAN REPORTS AT 1933 ANNUAL MEETING IN RICHMOND

After Mrs. Jas. F. Percy's gracious consent to mail with her call for the meeting of the Woman's Auxiliary to American Medical Association, in Milwaukee, copies of the resolution adopted by the Woman's Auxiliary to Southern Medical Association in Birmingham, November 1932, fifty copies, together with fifty copies of a letter of transmission, were prepared and mailed to Mrs. Percy, and she in turn mailed a copy of each to all members of the Board of Directors of the Woman's Medical Auxiliary to the American Medical Association.

A few of the States had held their annual meeting before the call was received, others failed to present the resolution for consideration, still others voted not to recommend its adoption at Milwaukee. Some, like my own state, failed to report its adoption to Mrs. Percy; consequently there were only a few interested in giving the project of a Jane Todd Crawford Memorial, as a national project, consideration.

On investigation we would impress on the minds of those who have been erroneously informed that The Jane Todd Crawford Memorial is not a project for the State of Kentucky. For it is not.

The women of Kentucky are intensely interested. Mrs. Crawford lived in Kentucky. The operation, first of its kind on record, was performed in Kentucky by a young aspiring surgeon, Ephraim McDowell, to whom memorials have been erected in Kentucky and elsewhere. His statue also stands in the Hall of Fame in Washington, D. C.

A Kentucky woman presented the story of Jane Todd Crawford to the Woman's Auxiliary to Southern Medical Association. A resolution suggesting that this Auxiliary adopt the work of a fitting memorial to this brave woman, as a project, was offered by an Arkansas woman.

This resolution was offered and adopted at our Asheville, North Carolina, meeting November 13, 1928.

Since that time the women of Kentucky have continued their interest and have given much time in research, ferreting out the true facts and details concerning Mrs. Crawford. Many new and interesting things have been learned about Dr. McDowell, as well. They have succeeded in having the road from Greensburg, Mrs. Crawford's home, to Danville, over which she rode sixty miles on horseback with a great tumor, from which she was suffering, resting on the horn of her saddle, to Danville, Dr. McDowell's home, for the operation, named The Jane Todd Crawford Trail. The Kentucky women have done, and are still doing, their part toward memorializing Jane Todd Crawford. You have only to read articles by Mrs. Hendon, Mrs. Blackerby, Mrs. McCormack and others to appreciate this.

Because this operation to which this woman submitted has resulted in relief, both physically and mentally, to womankind everywhere, because Mrs. Crawford and Dr. McDowell were born in Virginia, because the operation was done in Kentucky where both lived many years, because Mrs. Crawford lived the last thirty years of her life in Indiana and was buried there, your Memorial Committee felt the national organization should have an opportunity to share in paying tribute to her. The gesture was made repeatedly to the Woman's Auxiliary to the American Medical Association. Since they evidence no wish to have a part in this, the Woman's Auxiliary to Southern Medical Association, as per resolution adopted in 1928, should now proceed with the initiative of developing the project. For the time being we suggest the continuance of an informatory program, of telling the story of Mrs. Crawford's brave submission, to all woman's organizations who are interested enough to listen to it with an understanding sympathy.

We would ask that every State Auxiliary in the State belonging to Southern Medical Association appoint a Jane Todd Crawford Memorial Committee, whose duty will be to secure speakers, who will inform themselves on this subject, then tell the story in a fitting way whenever asked to do so.

We do not recommend asking for funds. If there are voluntary offerings, accept them, with the understanding that no special form of memorial has been decided upon.

You may like to have the chairman of each State Committee, with the chairman from the Woman's Auxiliary to the Southern Medical Association, form a sort of board or commission, whose sole duty for the present would be educational, to study and pass on to this organization such suggestions or plans as may be offered from time to time, remembering always that no definite decision can ever be made without the advice and council of our Advisory Board.

Respectfully submitted,
(Mrs. C. W.) Vivian A. Garrison,
Chairman, Jane Todd Crawford
Memorial Committee, S. M. A.

The following Resolution was adopted unanimously by the Southern Medical Auxiliary in Annual Session assembled at the Hotel Jefferson, Richmond, Virginia, November 15, 1933.

WHEREAS, the Woman's Auxiliary to the Southern Medical Association saw fit, after hear-

ing the story of Jane Todd Crawford, presented during the meeting of the Auxiliary in Asheville, North Carolina, November 15, 1928, to adopt a resolution committing them to the purpose of making a fitting Memorial to this heroine of pioneer surgery, and

WHEREAS, since that date an opportunity has been offered to the Woman's Auxiliary to the American Medical Association to share in this project, making it a National Memorial, and

WHEREAS, the Woman's Auxiliary to American Medical Association has not seen its way clear to take upon itself this obligation,

THEREFORE, be it resolved that we, the Woman's Auxiliary to the Southern Medical Association, do now again accept the establishment of this Memorial as a definite project.

Be it further resolved, that the President of the Woman's Auxiliary in each state, comprising the group from which the membership of the Southern Medical Association is formed, appoint a Jane Todd Crawford Memorial Chairman, whose duty it shall be to carry on an educational program, which will eventually give to all women the story of Jane Todd Crawford and Dr. Ephraim McDowell.

Be it further resolved, that the chairman from each of the states above mentioned, together with the chairman of the Jane Todd Crawford Memorial Committee from this organization constitute a Commission, said Commission

(a) To receive and transmit to the Treasurer of the Woman's Auxiliary to Southern Medical Association any offering of funds which may be made toward establishing this Memorial, said fund to be always deposited separate and apart from the regular funds of the Auxiliary, and to be called the Jane Todd Crawford Memorial Fund.

(b) To receive, study and transmit, with recommendations, to the Woman's Auxiliary to the Southern Medical Association, any suggestions or plans submitted as to fitting Memorial.

(c) To insure that no plans or suggestions shall ever be finally adopted until passed on by an Advisory Committee from the Southern Medical Association.

## ON THE AIR

The second radio-cast of prize essays written by school children on the subject of The Jane Todd Crawford Trail, in the counties through which the Trail passes, was given over WHAS in Louisville at 4:35 p. m., Saturday, November 25, by Miss Lou Ann Sidebottom of Greensburg, Green County. Mrs. George A. Hendon, Chairman of the Jane Todd Crawford Memorial Committee for Jefferson County, met the Greensburg party at the Studio and introduced to the radio audience Professor J. H. Sanders, Principal of the Greensburg High School, who in a few well chosen words, presented the prize winner and she gave her essay in clear, distinct diction. Accompanying Miss Sidebottom from Greensburg were her younger sister, Miss Russell, her English teacher, and Mrs. R. L. Durham, President of the Jane Todd Crawford Trail Association. Following the radiocast, the party were guests at Tea with Dr. A. T. McCormack and Mrs. McCormack in their apartment in the Brown Hotel.

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The Delegate from Florida, at the Southern Auxiliary's Annual Meeting, November 15, in the Hotel Jefferson at Richmond, reported that essay contests on the subject of Jane Todd Crawford are being conducted in the schools of that State.

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## MEMORIALIZING HEROIC WOMEN

**Robert F. Moore, Memorial Artist**
**The Peter and Burghard Memorial Company**

A unique contest for a grand prize was conducted at the Reinhardt Galleries in New York for three weeks, early in 1927, when visitors flocked from all over the country to see the twelve different interpretations of the typical pioneer woman presented by twelve different sculptors of note. Mr. E. W. Marland, a native of Pennsylvania who went west in 1907 but is now a resident of Oklahoma, sponsored the contest for the best model of a heroic figure, about 50 feet in height, of The Pioneer Woman. For this he planned to spend $350,000.00.

Said Mr. Marland: "Yes, I struck oil. The country has been good to me and the better I understand it, the more I love it. Looking about our Western Country, I saw monuments to Buffalo Bill, Kit Carson and a dozen other pioneers. Great men, every one of them, and a fine thing to honor their deeds. But, what about the pioneer woman? Well, I don't know much about art, but ever since civilization began the greatest nations have honored their greatest figures by sculptured representations. So, I determined that the pioneer woman should have her statue, the best likeness and interpretation we of today could create. And, it is going to stand in a place that she might have chosen herself."

"All of the sculptors have done well. Any one of these twelve figures is an excellant interpretation of the frontier woman. The decision will be hard to make. I expect to be guided largely by public taste but the final decision will be my own. This National vote is going to show exactly what the American people think about one of their greatest women." Following the exhibit in New York, the twelve models were shown in Boston and in several of the cities of the Middle and Far West so that most of the population could see them. Each visitor was asked to cast a vote for first, sec-

ond and third choice. These votes decided the selection of the prize winner.

The winning model was that of Mr. Bryant Baker. This typical pioneer woman of America, selected by popular vote, was under 30, and fair to look upon, simply garbed, wearing a sunbonnet, walking with long stride and resolute, courageous carriage. Beneath her right arm, she carried a Bible, her worldy possessions swung in a handkerchief bundle at the elbow and by the left hand she held the hand of a little boy eagerly interested in the panorama of life unfolding before him.

Said Bryant Baker: "What other woman ever had a better claim to glory? No woman of the world ever combined the ideal with hardy resistance in a more beautiful way. If the pioneer man blazed the trail, she stirred the pot and probably built the fire as well. She had to be homemaker in the wilderness, companion, sweetheart, mother and teacher."

## AN INTERESTING LETTER

Benton, Kentucky.
Marshall County.

Mrs. A. T. McCormack, Editor,
Woman's Auxiliary Section Kentucky Medical Journal
1422 Brown Hotel, Louisville, Kentucky.

My Dear Mrs. McCormack:

I have such a good piece of news that I am wondering if you will, through **The Quarterly** pass it on to Auxiliary members throughout the State, especially to those who are fortunate enough to live in a county which is, like ours, having this wonderful opportunity.

We have an interesting development in Marshall County that has great possibilities in the way of extending practical health work to a greater number of children. A group of school teachers from the rural areas meet here once a month to discuss their health problems and to compare suggestions for their solution. Each teacher keeps a record of the steps taken in what is called a record book or diary, and at the end of the course, (this is really a course in the Extension Department of the University of Kentucky at Lexington) each teacher will summarize her results. Of course this means extending the influence of the local health department by making the teachers active assistants in promoting public health. There is no cut and dried program outlined; each teacher makes a study of her own school, both of its environment and the needs of her children. On the basis of what she finds (and some of this information she must get from the county health department) she formulates her objectives for the year. These objectives, and the work she does to realize them, become her health program.

The teachers in Marshall County are working mainly along three lines.—First, they are trying to solve, in a cooperative way, such problems as involve large numbers of children, encouraging the children to take part and to learn from their own experiences as much as possible. One difficulty in this regard is the scarcity of reference material. Now, I wish every one of these schools would study and write essays on Kentucky's Medical and Health Laws, so simply presented in that September 1931 Bulletin of the State Board of Health, free for the asking. But—so many do not seem to know whom to ask for it! I just keep right on, like a chatter-box, telling them, "Write to the State Board of Health and ask for the Bulletin on the Medical and Health Laws. Also, ask that the Bulletin be sent to you each month. You will get it free. And it is so helpful." Then, if only the schools could afford to have Hygeia—here is work for all Auxiliaries!—how they would benefit by the wealth of material which comes monthly in this authentic health magazine! As it is, of course, the schools do use all available free material, especially that which comes from the State Board of Health, when it is sent to them. But unless they ask for it, how can the State Board of Health know that they want it and get it to them? So, I chatter on.

As an example of this type of project, about which I started to tell you, one school is working on control of communicable diseases—stimulated by an outbreak in the school this Fall. The children are learning that the simple, fundamental procedures of carrying and using clean handkerchiefs and covering coughs and sneezes, washing hands before eating are all means of prevention; that immunization is an imperative measure of prevention and that exclusion of a sick child promptly from the group, with daily watchfulness thereafter, is an important method of control. The Communicable Disease Chart, issued by the State Board of Health is studied by the older children in order to know what to do when there is an outbreak in the school or neighborhood. These children are not only preparing to be good citizens—they ARE good citizens right now.

Another thing these schools are trying to do is to solve individual problems of children. A child with a vision defect is more than likely to have difficulty with his school work; the teacher talks to the child first and encourages him to do all he can to correct his own vision. Of course the teacher changes his seat and gives him every advantage of good light possible. Further to help the child, the teacher talks over with the parents the child's difficulty, stressing the unfavorable effect it has on the child's progress. Still another instance—one teacher found that two of her children were hard of hearing, so she moved them to the front seats and now takes

the pains to teach them to learn lip reading. Sometimes many steps must be taken to put one child in condition to do his best work; often there are several such children and it means much time and effort to bring results satisfactory to both teacher and child. But—think what this means to the child throughout life!

The third point which these teachers are working on, is to make the maximum use of daily opportunities which come up in the community; on the way to school, on the playground, through various school activities and in subject matter outside of hygiene. Last week, just while Miss Rood was holding her class, Marshall County had a serious outbreak of rabies. This afforded an excellent opportunity to study a community problem—very easy to interest children in these cases as most of them have pet dogs and they will want to know more about it.

The teacher in this class will endeavor to lead the children to investigate the home problems which are related to such a community out break. It is hoped that the outcome may not only be the tying up and isolation of a dog suspected of being bitten, but innoculation of all valuable dogs against rabies.

When we realize that these children will in a relatively brief time, become our voters and decide important questions involving the health of our people, we see what valuable training they are receiving to become intelligent in their actions.

I learned that courses similar to this are being given by Miss Elma Rood in Covington, Prestonsburg, Pikeville and one at Lexington on the University Campus. Auxiliary members in those cities are missing much if they are not availing themselves of the opportunity of sitting-in on one of Miss Rood's classes. She has a wonderfully appealing way of drawing out the teachers in their individual problems. We can learn much there of how we may help these teachers who are carrying on this work of teaching our children how to live, which is, of course, true education. My personal wish is that every teacher could have this advantage and that every Auxiliary member might have the opportunity of helping them.

Sincerely yours,
(Mrs. V. A.) May C. Stilley

## CHATTING

**Mrs. John C. Rogers, Louisville.**

(With a "Curtsy" to and a Smile of Appreciation for our Advertisers and for our Isabellas)

Mrs. Jim Jones (Mary): "Oh, I'm so glad you came, Anna. I've the best news for you!"

Mrs. Tom Brown (Anna): removing her wraps and eagerly gazing about, "What? Tell me quick."

Mary: "It's the antique."

Anna: "Looks nicely polished—as though it had its face washed."

Mary: "Yes, but isn't it wonderful that it's bugless, at last? The Louisville Chemical Company exterminated every one of those pesky termites from my Sheraton Secretary! I'm so relieved."

Anna: "Indeed! Well that is fine. I'm glad for you. How's contract, Mary?"

Mary: "Contract! I've been playing 'Contract' alright, but a different kind of contract! These contracts are for advertisers to sign on the dotted line for advertisements in the Woman's Auxiliary Section of the Kentucky Medical Journal. In fact, a whole raft of us Contract Players—New Deal model, Anna!—descended upon the town. Mrs. Stetson said she went so hard and so fast that she hadn't time to think about clothes, even!"

Anna: "Yes, but when Mrs. Stetson came to The Misses Walsh and Jaglowicz made her some adorable dresses! And, the Adornee Beauty Shop made up on her hair, skin and nails for all the time she had lost."

Mary, laughing: "Diet was out, where we were all concerned. We walked miles and miles getting contracts. And, we all kept on ordering delicious foodstuffs from B. & W. Imorde and Deckel. Walking made us all so hungry. In fact, Mrs. Jackson said that if we kept this up, she was afraid the Louisville Grocery Company, Maloney-Davidson Company, N. M. Sanders and Sons and Denunzio Fruit Company wouldn't be able to keep stocked up with groceries, poultry, eggs and fruit!"

Anna: "It must have been fun, though. I'd like to try it, too."

Mary: "Do. Come with me next week. I have some others to contact. Get the feel of it and then you will find your own favorites for our Auxiliary Shopping Guide. Mrs. Slocum, at last, was fitted with eye-glasses at the Southern Optical Company. Said she looked so much more impressive in the new style glasses while waving the Rate Sheet about the Advertiser's head. Anyway, we each made a host of friends and learned a lot with no hard feelings, either, when we didn't get an ad. That's just business and we're learning it."

Anna: "Tom and I attended Dr. Glass' funeral at Cralle's this morning. (At Cralle's they seem to take so much worry off the family). A Peter and Burghard Stone Company Memorial is to be put up for Dr. Glass, later."

Mary: "So I understand. Have you seen Ella, lately?"

Anna: "Yes. When I stopped at the Aetna Service Station, yesterday, to get my car fixed up for winter weather. Ella drove in for gas. She said they had been worried about Bobby. Afraid he had diphtheria but, just a sore throat, after

all. But—the physician administered Gilliland's diphtheria anti-toxin to Bobby and Gilliland's Diphtheria Toxoid to all of the other three children. So—no more worry, now!"

Mary: "What a blessing those biologicals are! Well, did you and Tom enjoy Christmas?"

Anna: "We always do."

Mary: "We went in for useful things, this year. I chose a Stratton and Terstegge Company's Kelvinator and I've learned to make delicious ice cream and frozen salads. Had my eyes fitted to new glasses at Muth's. So satisfactory not to make a long arm to read, now! Had the Swiss Cleaners and Schrader Brothers do up all curtains and draperies and all the suits and dresses we Jones' possess. That is a joy. It's so nice to be clean. Then my husband allowed me to get all the things I wished in a medical and a beautifying way from the Medical Arts, Louisville Apothecary, Model Drug Stores and Newman's. Lots of fun doing that. Then, I turned him loose at Theodore Tafel's and asked him to get all the surgical supplies and instruments his heart desired and took him to Bush-Krebs to see about the engravings for his newest medical treatise."

Anna: "Splendid! We went in for practical things, too, this year. I had my husband's photograph made at Berry's. And it is a fine likeness, too. His mother and I needed that, for Tom is away so much. Now, we can, at least have his picture with us. Treated myself to a lot of Nibrock Towels from the Miller Paper Company. They are so nice and save so much in the kitchen. Then Tom sent me lovely roses from Haupt's and I gave him six new books from The Wilderness Road Book Shop that we both will enjoy!"

Mary: "You, especially! Clever Santa Claus! Let me say, we gave Jack and Sally a huge party. They had all they could hold of Donaldson's Rolls and Hampton's Graham Crackers—chocolate frosted ones, you know, and some white frosted too. They melt in your mouth. Salads, too! And as all their "gang" drink milk, I ordered all the milk they could drink from Ewing-Von Allmen and the Kentucky Dairies. Oh, no! I didn't forget Sally's Certified milk, either. She had plenty."

Anna: "Mary, I am so glad you took the material for the Quarterlies to the Times-Journal Publishing Company. How cozy your open fire is! But, a bit messy, sometimes, isn't it?"

Mary: "No, it is not! Stearns Coal is the cleanest coal I ever used."

Anna: "We had a fine week-end in Indiana. I enjoyed going over the K. & I. Bridge, the oldest route between the North and South. Makes me feel pioneer-y."

Mary: "Beautiful scenery, too. Must you go so soon? Why, its snowing! Dr. Jones has to stop at Stoll's on his way home for oil, gas and greasing the car. So—he will be late. If you must go, Happy New Year!"

Anna: "I'm going to visit The Federal Hill Art and Gift Shop in Bardstown, soon. Be good and I'll bring you back some of those precious little gifts—'Gifts From the Heart of Kentucky!' Happy New Year to you and yours!

## BOOK REVIEWS

### Devils, Drugs and Doctors

**Mrs. George A. Hendon, Louisville**

Devils, Drugs and Doctors, written by Dr. Howard Wilcox Haggard, (born in LaPorte, Ind., July 19, 1891) Associate Professor Sheffield Scientific School, Yale, describes in narrative form the story of our progress in the acquisition of knowledge of human ills.

The general theme of the six chapters is indicated by the title. First is the primitive conception of the cause of diseases—they were due to "Devils," and the method of treatment based on this conception was the casting out of devils by priestcraft.

The first part of the book "The Conquest of Death at Birth" consists of four chapters in which is narrated the history of childbirth from the earliest times.

The second part tells the story of Anaesthesia. "No greater boon has ever come to mankind than the power thus granted to induce a temporary but complete insensibility to pain."

The progress of surgery is the subject of part three.

Part four is a history of the great plagues that at times have devastated large areas of the world, together with means to eradicate them.

The last chapter "Medicine Through the Ages" is a short account of contributions scientific medicine has made to civilization starting with Hippocrates.

The book is one of fascinating interest. The illustrations alone, with their full descriptive legends, are a liberal education.

Published 1929, by Harper & Bros., New York, London. 405 pages. $3.50 For sale at Wilderness Book Shop, Brown Hotel, Louisville.

### 100,000,000 GUINEA PIGS

**Mrs. Arch Herzer, Louisville**

In 100,000,000 Guinea Pigs by Arthur Kallet and F. J. Schlink we find that the title refers to you and me and the 125,000,000 inhabitants of the United States who are being experimented upon, often injuriously, sometimes fatally by some producers of food, drugs and cosmetics. The authors, members of the Consumers Research Council, are attempting, through this book, to show that we are not adequately protected by the Food and Drugs Act and to this end have stated their case in terms of brand or trade names irrespective of the size or power of the company named. Is your favorite toothpaste, mouth wash,

antiseptic, breakfast food, cold cream, etc., written up here?

Published, 1933, Vanguard Press, New York. For sale at Wilderness Road Book Shop, Louisville. 312 pages. $2.00.

## THE JOY OF LIVING

**Mrs. Irvin Abell, Louisville.**

The Joy of Living—An Autobiography, by Dr. Franklin H. Martin. This most interesting literary contribution is given in two volumes wholly different in subject matter, and as in artistry, the characteristics of the one, by contrast, enhance those of the other. Together they comprise an epic of the field of medicine and surgery from the days of the covered wagon to the days of the automobile and airplane as observed by one who participated in the developments of this transitional period. His story from the happy days of childhood to the struggle for an education; from student days to the fruition of his efforts in attaining a distinguished place on the roster of world surgeons; from the practice of surgery to the editorship of the leading surgical journal of the world, the organization of the American College of Surgeons, the largest in the world, and his preeminent services on the Advisory Commission and War Council, is told in simple, yet beautiful English, conveying to the reader the conviction that Dr. Martin has possessed visions and ideals which with patient, persistent and diligent effort he has put into execution.

The first volume unfolds in a clear and interesting manner the succession of events connected with his life from childhood to the time of his activity in the World War. Beginning with the migration of his parents in a covered wagon to the prairie of Wisconsin, where he was born July 13, 1857, and where he grew to manhood, the story of his early life parallels the development of the West. His transition from the heat and the tasks of the harvest fields was occasioned by the apparition of the good old country doctor going about his errands of mercy, affording young Martin an inspiration that sent him to Chicago for a medical career. "As a student young Martin won distinction which placed his ambitious foot on the first round of the ladder." The remaining rounds were successfully compassed by inherent ability and persistent diligent effort. The second apparition which became an inspiration throughout his carreer came in the guise of Isabelle Hollister, whom he married in 1886. They have climbed the hill together in a beautiful spirit of mutual understanding and helpful reciprocity. Details of medical development and progress are entertainingly portrayed together with interesting comments on medical education, the Columbian Exposition, the Spanish-American War, the turn of the century in 1900 with particular reference to the then accumulated knowledge in the field of medicine, the Gorgas Memorial and the development of the Mayo and Crile Clinics. The concluding pages of the first volume are devoted to the fulfillment of Dr. Martin's vision for the establishment of a representative journal of surgery and the organization of the College of Surgeons, both representing achievements of great value to the profession and the latter to the lay people, as well.

Volume II covers but two years of Dr. Martin's life, but they were replete with vivid personal war experiences and with wartime activities that formed a vital part of America's participation in the great conflict. It has been truly said by a reviewer that "No history of the nation at war can be comprehensive without drawing largely on this story of the industrial reorganization and mobilization which were essential to that mighty effort." The first chapter finds Dr. Martin in London following a meeting of the Clinical Congress. The outbreak of war changed conditions overnight, bringing difficulties and dilemmas to the visiting Americans. The solution of these in the midst of martial surroundings offers romantic narration often of breathless interest. Following Dr. Martin's return home he became, by Presidential appointment, a member of the Advisory Commission and War Council. The activities of this important body, as well as those of the General Munitions and General Medical Boards in the mobilization of the country's resources, man-power and material, for the prosecution of the war, are graphically related, interspersed with personal experiences and observations upon correlated war movements which add materially to the story. In November, 1917, the medical officers in the U. S. Army numbered but 440 and those in the U. S. Navy but 329. At the close of hostilities the medical personnel had increased in the Army to 30,591 officers; and in the Navy to 25,700 officers, an accomplishment of the General Medical Board, ranking the contribution of the medical profession above that of any other professional group.

The introduction to Volume I is written by Drs. William J. Mayo and George W. Crile, his life-long friends and associates, whose positions in American medicine afford points of vantage from which a correct appreciation and evaluation of Dr. Martin's professional career is made; the introduction to Volume II is inscribed by the Secretary of War, Hon. Newton D. Baker and Mr. Daniel Willard, President of the Baltimore and Ohio Railroad and Chairman of the Advisory Commission, whose official positions gave them intimate acquaintanceship with the activities portrayed. Both volumes contain illustrations which give added pleasure and insight to their perusal; both are valuable from a historical standpoint and intensely interesting in their depiction of a worthwhile career.

Published, 1933. Doubleday, Doran & Co., Inc. Garden City, New York. For sale at Wilderness Road Book Shop, Louisville. 2 volumes, $7.00. 1017 pages.

(Reviews Continued on Page 16)

# Tuberculosis

Mrs. Lucius Ernest Smith, Louisville, State Chairman.

## THE CHAIRMAN'S MESSAGE

**Mrs. L. E. Smith**

Women have always protected their homes and their children. Their bravery, courage and endurance, along with their heroic achievements, although unheralded, have made possible the pages of history. Whenever war has threatened our land and danger has come near the fireside, our mothers have been found standing guard at the threshold.

The mothers of Kentucky are facing today the most formidable enemy that has ever menaced our State and our families. Tuberculosis is invading homes, entering schools and passing, easily and rapidly, from the hovel to the mansion. It recognizes no social distinctions; it is no respector of persons. It strikes alike at the rich and the poor, the high and the low; it is ever ready to enter any door opened through ignorance, indifference or carelessness, to its forward movement. It holds, with a stubborn resistance, all grounds gained; it strikes down with a relentless hand our best young people when life is the most worthwhile.

While Tuberculosis is no respector of persons, it does respect conditions. With the knowledge that it is preventable and curable, we can easily create the conditions under which it cannot invade our homes and sow its seed, to rob us later, of our young manhood and womanhood.

There is no deep mystery hiding the behavior of the Tubercle germ from our medical advisors. For more than fifty years they have known enough to prevent and control Tuberculosis. And yet, we still find it the leading cause of death in the active period of life. This, truly, is sufficient cause for wonder and alarm.

Tuberculosis has no early, easily recognizable symptoms as have many other diseases; therefore, it is usually well entrenched in the body before its presence is detected. Again, it is usually spread among children, and children are not capable of interpreting or explaining symptoms.

This phase of Tuberculosis will be discussed in our next issue. Let me say here, however, that we must not forget Tuberculosis is a family disease—primarily a disease of childhood—spreading in the home and school, and that, if it is ever to be controlled, the fight must be made there. Mothers are the guardians of the home and in lesser measure, of the school as well.

As members of families of the guardians of community health —our State Medical Association—and as those selected by our organization to deal directly with Tuberculosis, let us first familiarize ourselves with the problem confronting us and then let us stir our local organizations and our communities to a deeper realization of the significance of the warfare against this great enemy to Kentucky homes and Kentucky children.

As chairman of the State organization, I am depending upon you to make your part in this campaign more than a formal effort. We are in a great crusade, and we **must win.**

We have just gone through the Christmas Seal sale. In April, we will be privileged to serve in the Early Diagnosis Campaign, and in the fall we will have an opportunity to take some worthwhile part in the educational program to get ready for the Christmas Seal sale in December. Let us organize those in our communities who can and will work with us. It is your job and mine. Let us prove ourselves worthy of the confidence placed in us, and help win one of the greatest struggles womanhood has ever undertaken for the sake of Kentucky homes and Kentucky children.

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## VOICES FROM THE FIELD

**Graves County** — The chairman reported interest in the Seal sale and pledged support.

**Jefferson County** — Mrs. R. T. Hudson and Committee assisted in Christmas Seal sale. Booths were operated in convenient places where Seals could be purchased and adjustments made in local department stores.

The chairman was also helpful to the State Association in placing radio programs over both stations.

**Marshall County**—Pledged support to the Seal sale campaign.

**Nelson County**—Mrs. Laura B. Summers lost no time in lining up her organization for Seal sale work. She planned also to use them as speakers for the educational program.

**Perry County**—Mrs. R. L. Goad and her helpers have been busy in Perry County. Their Tuberculosis Essay contest last spring in the Hazard Schools was a success. The same contest was launched in the County schools in November and December to be reported later. We are proud of the work done in Perry County and hope other counties will follow their lead.

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## T B—LETS

TB. is no respector of persons. It does respect conditions.

TB. thrives in hard times.

TB. has not signed the code. It works twenty-four hours a day.

## BOOK REVIEWS

(Continued from Page 13)

### OUR MOVIE MADE CHILDREN

**Mrs. Emmett F. Horine, Louisville.**

Our Movie Made Children, by Henry James Forman marks an epoch in the consideration of motion pictures and their effect upon our youth. Its significance lies partly in the fact that it is the first really scientific study which has been made. Over a period of four years, a group of scientists, psychologists, sociologists and educators at the instance of the Motion Picture Research Council, and supported by the Payne Foundation, have carried on this intensive and extensive research.

Perhaps the readers of this brief summary will find particularly interesting the sections dealing with the physical effects (a) visual fatigue and its effects, (b) motility in sleep after exciting pictures. For this experiment, over a period of many months, a very delicate instrument called the Hypnograph was used. (c) Emotional strain and hysteria. This, charted by the Psycho-Galvonometer.

Among many interesting facts appeared the following:

77,000,000 persons attend movies weekly in the United States.

28,000,000 are children.

6,000,000 are under 7 years of age.

75—80% of all feature pictures deal with crime, sex, love and mystery.

10% of all boy and 25% of all girl delinquents are made so by the movies.

32 types of crime are actually depicted on the screen.

70% of visual education is retained by the child.

We safeguard our children against impure water and impure food. Why not against this menace?

How?

By censorship, National and private.

By providing play substitutes for the movies.

Published, 1933, McMillan Co,, Chicago, New York. For sale at Wilderness Road Book Shop, Louisville. $2.00. 288 pages.

## RADIO WAVES

**Mrs. John L. Jones, Louisville, State Chairman**

We are pleased and eager to welcome to Louisville a new Radio Station—WAVE. It is to be a combination of stations WLAP in Louisville and WFIW in Hopkinsville.

The Auxiliary is especially interested in this new station as we have for the past three years given a monthly health talk from station WFIW. During that time there was only one month when the program was not filled by the Radio Committee. The managers of WFIW extended to us every courtesy and several times expressed their appreciation for the health talks sent them.

Station WLAP also very generously gave time on the air to broadcast health talks for Jefferson County Auxiliary each week for more than two years. The Doctors of Jefferson County prepared and presented these talks.

We now wish to extend a cordial welcome to station WAVE and express a cordial welcome to that their broadcasting may be a source of pleasure and profit both to them and to their Radio Audience.

## NEWS FROM THE COUNTIES

### Calloway

Dr. Ben S. Keys is again able to practice, following a long illness.

Dr. Hugh Leavell Houston, son of Dr. E. B. Houston and Mrs. Houston, Murray, is recuperating at home from a severe attack of pneumonia which interfered with his interne service in Richmond, Virginia.

### Jefferson County

Jefferson County has a very busy program planned for the winter with much interest being shown by its members. The fall activities began in September with the regular quarterly luncheon at which fifty-two women were present.

The Study Class, with Mrs. J. D. Gibbs as chairman, meets the first Monday of every month and this year is reviewing books written by or about doctors. In October, Miss Adelaide Bostick reviewed "Out of my Life and Thought" by Albert Schweitzer and Mrs. Blanche Blake discussed Current Events. In November, Mrs. Wm. E. Fallis discussed "The Arches of the Years" by Halliday Sutherland and Mrs. L. Lyne Smith gave Current Events. In December, Mrs. Emmet F. Horine reviewed "Movie-Made Children" by James Forman and Mrs. Arch Herzer reviewed "100,000,000 Guinea Pigs" by Arthur Kallett and F. J. Schlink. Mrs. L. Lyne Smith conducted the Current Events program

The Sewing Unit, with Mrs. F. Parks Ogden, chairman, and Mrs. Arch Herzer, Secretary and Treasurer, meets the second Tuesday of every month. This fall they have been making garments for the Susan Speed Davis Memorial and Children's Free Hospital. Mrs. S. C. McCoy, who has charge of the Hospital Committee, sees to the distribution of the finished work. In October the unit met at the home of Mrs. S. C. McCoy, in November with Mrs. George C. Leachman, and in December with Mrs. E. L. Pirkey.

On November 21, the Unit sponsored a card party at the Cherokee Milk Company Auditorium. The funds derived from this party will be used to buy material to carry on the splendid work of the organization.

Our president, Mrs. J. Duffy Hancock, spent some time in Chicago in October while her husband attended the American College of Sur-

geons. Dr. and Mrs. Hancock will attend the Southern Surgical Association Convention in Hot Springs, Virginia, in December.

Dr. A. T. McCormack and Mrs. McCormack, Dr. Irvin Abell and Mrs. Abell, Dr. Wm. E. Fallis and Mrs. Fallis, Dr. Wm. E. Gardner and Mrs. Gardner, and Dr. L. Lyne Smith and Mrs. Smith, Dr. Frank P. Strickler and Mrs. Strickler were among those who were in Richmond, Virginia, for the Southern Medical Association in November.

Members of the Auxiliary will be glad to know that Mesdames W. C. Dugan, E. C. Redmon, and Sam Overstreet are recuperating from recent illnesses.

The Auxiliary extends its sympathy to Mrs. Zimmerman on the recent death of her husband, Dr. B. F. Zimmerman.

While on the press, the sad news comes of the death of Mrs. Blanch Hibbett Blake, Louisville, December 17. Mrs. Blake was an active member of the Study Class and an early member of the State Committee on the Jane Todd Crawford Memorial.

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**Nelson**

Mrs. Laura B. Summers was made an Honorary Member of the Nelson County Auxiliary at its 1933 Annual Meeting, held October 10th, when the election of officers was held and the Standing Committees appointed as follows:

President—Mrs. J. I. Greenwell, New Haven
Vice President—Mrs. C. B. Elston, Bardstown
Secretary-Treasurer—Mrs. A. D. Steely, Bardstown

**Committee Chairmen**

Archives—Mrs. R. H. Greenwell, Bardstown
Child Welfare—Mrs. Laura Summers, Box 151, Bardstown
Historian—Mrs. W. E. Crume, Bardstown
Hygeia—Mrs. A. D. Steely, Bardstown
Jane Todd Crawford Memorial—Mrs. A. D. Steely, Bardstown
Organization—Mrs. J. I. Greenwell, New Haven
Public Instruction—Mrs. J. I. Greenwell, New Haven
Public Relations—Mrs. E. D. Mudd, New Haven
Radio—Mrs. W. E. Crume, Bardstown
Tuberculosis—Mrs. Laura B. Summers, Box 151, Bardstown.

Two new members have joined since last June —Mrs. C. B. Elston, daughter of Dr. J. B. Carpenter, Stanford, and Mrs. Holman McCawley, daughter of the late Dr. Ap Morgan Vance, Louisville. Both of the new members live in Bardstown.

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Regular study of Parliamentary Law has been undertaken by the members of the Nelson County Auxiliary under the leadership of Mrs. Laura B. Summers.

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Dr. and Mrs. A. D. Steely attended the Annual Meeting of the Southern Medical Association and Auxiliary held in Richmond, Virginia, November 14-17. Mrs. Steely was honored by election as one of the five members on the Nominating Committee of the Auxiliary.

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**Perry**

A Silver Tea for the Jane Todd Crawford Memorial Fund was held by the members of the Perry County Auxiliary, Thursday afternoon, November 16th, at the charming home of Mrs. W. L. Welch, Hazard. Receiving with Mrs. Welch, were: Mrs. S. B. Snyder and Mrs. R. L. Collins. Mrs. D. C. Combs greeted the guests at the door.

Mrs. H. W. Gingles presided at the tea table and Mrs. R. L. Goad poured the coffee, with Mesdames H. Fouts, Dana Snyder, J. C. Coldiron, F. F. Shelton, Ben Fitzpatrick, David Barton, C. M. Adams, J. P. Boggs, S. M. Ritchie, M. E. Combs, W. H. Hibbs, A. M. Gross, J. M. Ray, D. D. Carr, the Misses Mary Jane Hobbs, Annabel Cole and Nannie Owen assisting Mrs. L. P. Larkey in the service of a delicious salad course. Little Nora Lee Johnston held the Silver Basket.

The Perry County Auxiliary colors, yellow and green, predominated throughout this gracious home. Beautiful potted plants and soft yellow candles formed an exquisite setting for the daintily laid table with its bountiful supply of delicacies arranged about a choice centerpiece of yellow chrysanthemums on an embroidered linen cloth of rare beauty and texture. About eighty-five persons enjoyed the delightful occasion.

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Our Past-President, Mrs. G. B. Wheeler, is a patient at the Julius Marks Sanatarium in Lexington. She has been at this hospital for about two months and is making good progress toward recovery. A letter or a card from her Auxiliary friends always brightens the day for her. Mrs. Wheeler was a Vice President of the State Auxiliary during the year 1931-1932.

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"I am all in the red" said the Tubercle Bacillus after infecting a Russian radical.

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TB. is spread in the home. No home is safe until all homes are safe.

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TB. costs the people of the United States more than a billion dollars a year. That is more than $8.00 each for every man, woman and child. How much are you doing to prevent this?

## A NEW FOOD AND DRUGS ACT

(Continued from Page 7)

House on at least three different occasions but, regardless of its recognized merit, has never been enacted by Congress.

Demand for a complete remodeling of the obsolete mechanism of 1906 has received a new impetus through the interest of the President of the United States. With this incentive, supported by the sympathy and cooperation of Secretary of Agriculture Henry A. Wallace and Assistant Secretary of Agriculture Rexford G. Tugwell, recommendations for a bill to supplant the present food and drugs act have been drafted and were submitted by Secretary Wallace to the appropriate committee chairmen of the House and Senate on June 1, 1933. The bill was introduced in the Senate on June 12 by Senator Royal S. Copeland of New York.

The new draft preserves all of the worthy features of the present law. Its principal additional features are listed below:

(1) Cosmetics are brought within the scope of the statute.

(2) Mechanical devices intended for curative purposes, and devices and preparations intended to bring about changes in the structure of the body are also included within the purview of the law.

(3) False advertising of foods, drugs and cosmetics is prohibited.

(4) Definitely informative labeling is required.

(5) A drug which is, or may be, dangerous to health under the conditions of use prescribed in its labeling is classed as adulterated.

(6) The promulgation of definitions and standards for foods, which will have the force and effect of law, is authorized.

(7) The prohibition of added poisons in foods or the establishment of safe tolerances therefor is provided for.

(8) The operation of factories under Federal permit is prescribed where protection of the public health cannot be otherwise effected.

(9) More effective methods for the control of false labeling and advertising of drug products are provided.

(10) More severe penalties, as well as injunctions in the case of repeated offenses, are prescribed.

Taking these added features in the order in which they have been presented, let me explain briefly their importance.

(1) The present law is wholly without jurisdiction over cosmetics except in those rare instances when the labeling bears medicinal claims. While the majority of cosmetics are harmless, tragic occurrences have resulted from the unwitting use of products containing highly dangerous ingredients advertised and labeled as entirely harmless. No better medium of control and consumer protection exists than the food and drugs act. It is logical to extend the provisions of the statute to cover cosmetics. As an example of the type of product which would be contraband under the amended statute, the depilatory known as "Koremlu Cream" may be cited. This product, represented as entirely harmless and actually beneficial to the skin, contained a highly poisonous chemical—thallium acetate. Its widespread utilization for the removal of superfluous hair caused many cases of severe injury to users before the manufacturer was forced into bankruptcy by accumulation of damage suits. The Federal Government, lacking legal authority to control cosmetics, was unable to give the consumer the protection which should have been afforded.

(2) Mechanical devices represented as helpful in the cure of disease need not be illustrated. Many of them serve a useful and definite purpose. The weak and ailing furnish a fertile field, however, for mechanical devices represented as potent in the treatment of many conditions for which there is no effective mechanical cure. The need for legal control of devices of this type is self-evident.

Products and devices intended to effect changes in the physical structure of the body not necessarily associated with disease are extremely prevalent and, in some instances, capable of extreme harm. They are at this time almost wholly beyond the control of any Federal statute. As a striking illustration the product "Marmola" may be cited. It is a "slenderizing" compound. It is not a drug within the present terms of the food and drugs act, since that law defines a drug as a substance or mixture of substances intended to be used for the cure, mitigation or prevention of disease. The Supreme Court of the United States, in discussing this product, stated:

"Findings, supported by evidence, warrant the conclusion that the preparation is one which cannot be used generally with safety to physical health except under medical direction and advice. If the necessity of protecting the public against dangerously misleading advertisements of a remedy sold in interstate commerce were all that is necessary to give the Commission jurisdiction, the order could not successfully be assailed."

The Supreme Court was referring to an order of the Federal Trade Commission directing the manufacturer to cease advertising and selling "Marmola" as a safe and dependable treatment for obesity. The Supreme Court, in ruling against the Federal Trade Commission, recognized the dangerous character of the product, but held that the Government's lack of jurisdiction prevented its removal from the channels of

trade. The new statute, if enacted, will bring such products under the jurisdiction of the law.

(3) The present terms of the food and drugs act are not applicable to advertising statements relating to foods, drugs and cosmetics. Under present high pressure methods of advertising it is an undoubted fact that the American purchaser more often acquires his concept of the qualities and virtues of a food, drug, or cosmetic from advertising statements broadcast by radio or appearing in printed form than he does by visual inspection of the labeling of the article itself. His intention to purchase is formed before he actually sees the product. Under such circumstances there is little incentive to read the labeling. There has been a too common practice in some quarters to meet literally the requirements of the food and drugs act as to the honest labeling of products subject to its jurisdiction, but to allow imagination full play in devising advertising designed to entice the consumer. The need for control of serious abuses in the advertising field has long been recognized by the public, by ethical manufacturers and advertising specialists. Appreciating its lack of control over advertising under the present food and drugs act, the Food and Drug Administration some years ago began a series of educational broadcasts, accompanied by the publication of articles in various journals, designed to encourage the intelligent reading of labels. It is recommended that the more conservative label claims on products subject to the act be accepted at face value rather than extravagant representations made in advertising. The campaign was not without effect. A very natural reaction, however, was a demand on the part of consumers and interested persons generally that legal control of advertising be inaugurated.

(4) The present statute is largely negative in its requirements as to labeling. It provides not for what must be stated upon the label but for what must not appear thereon. It enjoins truth, but does not enjoin the whole truth. Its prohibitions are against false and misleading statements, but does not insist on positive and informative statements except declarations of the quantity of contents on foods in package form and certain other very limited specific declarations. Following the inauguration of the read-the-label campaign there was a natural reaction on the part of consumers by way of a demand for more informative labels. The consumer pointed out that intelligent buying is difficult, if not impossible, unless labels are required to carry enlightening information as to the composition and character of a product. Under the new bill provision is made for disclosure on the label of sufficient facts to enable intelligent and discriminating buying—a requirement which will operate unquestionably to the advantage of the consumer and the responsible manufacturer.

(5) Practically all drugs are dangerous if not properly administered. Prohibition of traffic in dangerous drugs would rule most legitimate medicinals off the market. Certain products having distinct physiological effects and unquestionably to be classed as drugs are so potent for harm if indiscriminately administered that there can be no excuse for their unrestricted distribution to the consuming public. A solution of radium known as "Radithor," responsible some years ago for the untimely death of a prominent citizen is illustrative of this type of objectionable drug product. The article, in spite of its highly dangerous character, was wholly legal under the present statute. It was labeled precisely for what it was and bore no false or fraudulent therapeutic claims. Its unrestricted sale was distinctly against public interest. It should have been possible, but was not, for the Government to have prohibited its sale. The Food and Drug Administration had published repeated warnings about the danger of such products. It could go no further under its legal powers. The new bill will prohibit traffic in any drug product of this type which is, or may be, dangerous to health under the conditions of use prescribed in the labeling thereof.

(6) The present law gives the Department of Agriculture no authority to establish legal standards for food products except in the limited field of canned foods. The food standards announced by the Department are wholly advisory in character and compliance is a voluntary matter on the part of the manufacturer. Such advisory standards are based upon the consensus of consumer understanding and upon good manufacturing practice. In order to prove that a product sold within the jurisdiction of the food and drugs act which fails to comply with the advisory standard is adulterated or misbranded, it is necessary for the Department to present to the court and jury convincing evidence that the advisory standard does represent the actual composition of the product expected by the consumer and recognized by the majority of the trade. Proof that the product on trial does not meet the advisory standard is of no avail unless the validity of the standard is first established. This imposes a double burden of proof upon the Government as well as the expense of bringing into court trade and consumer witnesses who are prepared to testify that the advisory standard accurately represents the product. It has long been recognized that this necessity imposes a handicap, that the lack of legal standards is a distinct disadvantage to ethical manufacturers who are

forced to compete to their cost with products which differ from the advisory standards. The establishment of food standards having the force and effect of law will vastly simplify the problem of enforcement and will unquestionably be of great advantage to the consuming public and to the manufacturer of legal products.

(7) A complete elimination of all poisonous substances in foods is in some instances impossible. Where the presence of poisons is unavoidable their amounts must be kept so low that by no possibility will the food be harmful to the user. Where they may be dangerous in any amount they should be absolutely prohibited. The present statute contains no provision authorizing either the complete prohibition of traces of poison in foods or the establishment of tolerances for poisons. On the contrary, it imposes upon the Government the obligation of showing affirmatively in every instance that a food containing an added poisonous ingredient may be harmful to health under the conditions of use. The problem of establishing possible poisonous effects as a result of the consumption of minute amounts of poisonous ingredients in foods presents extreme difficulties. Without such proof, a food containing an added poison can not be condemned as adulterated. The Government is not permitted under the terms of the present statute in establishing its case to take into consideration similar poisons in other items of the diet although these may contribute to the total intake of the poison and be an important factor in determining the relative harmfulness of the adulterant.

For fifteen years the Department of Agriculture has been devoting a major part of its attention under the food and drugs act to the control of interstate traffic in fruits and vegetables carrying excessive and dangerous residues of poisonous sprays. Many hundreds of shipments containing such residues have been seized and condemned and prosecutions have been directed against the shippers. While the Government has been uniformly successful in establishing the correctness of its charges in the rare cases which have been defended, the technical character of the evidence required to be submitted has been difficult of presentation and confusing to lay juries. It has imposed upon the Government the necessity of presenting an array of scientific witnesses at public expense which has made a material inroad upon the funds available for law enforcement purposes. Under the new bill provision is made for the establishment with the force of law of such tolerances or prohibitions relating to added poison in foods as will guarantee entire protection to the consuming public.

(8) Some years ago a disastrous epidemic of the disease known as botulism occurred as a result of the consumption of improperly packed ripe olives. Numerous fatalities occurred and the industry was practically destroyed. Painstaking scientific studies and the most rigid manufacturing control in the preparation and packing of ripe olives has now eliminated this danger. During the period of several years when the industry itself was seeking the causes of its difficulties and developing methods for safe production, it would have been in the public interest had the Government been able to have placed the industry under such a form of surveillance as to guarantee safe manufacturing practices. Such supervision would have been highly acceptable to the industry itself. No statutory authority for such a service then existed. The new bill provides power to require manufacturers to operate in certain instances under Federal permits. This method of regulation will be invoked only in those instances where a menace to health is involved and where adequate protection of the public can not otherwise be effected.

(9) The present law defines a drug as misbranded among other things if its label bears false and fraudulent therapeutic claims. This requirement imposes upon the Government the necessity of proving not only that the preparation will not have the curative or therapeutic effects claimed but likewise, that in making such claims the manufacturer was guilty of fraudulent intent, that is, that he had knowledge of the ineffectiveness of the product. It is a comparatively simple matter to prove through competent medical evidence that an extravagantly labeled medicine will not be effective in curing the disease conditions for the treatment of which it is offered. It is far more difficult to establish that in making such therapeutic claims the manufacturer did so with the knowledge of their falsity.

In a recent case in which the Government unsuccessfully prosecuted the manufacturer of a preparation offered for the treatment of diabetes, outstanding medical witnesses testified to the entire ineffectiveness and worthlessness as well as the actually dangerous character of the product. The Government lost the case, however, primarily because it was unable to prove to the satisfaction of the jury that the manufacturer was aware of the worthlessness of the product. The manufacturer's intent in no wise ameliorates the damage sustained by the consumer of worthless medicines. The new measure proposes to eliminate the need for establishing the fraudulent character of false representations with regard to medicinal products and instead holds a drug misbranded if its labeling bears any representation directly, or by

ambiguity or inference, concerning the effect of the drug, which is contrary to the general agreement of medical opinion.

(10) The present law establishes a fine of $200 as the maximum penalty for a first offense. In the recent convictions under the food and drugs act of individuals responsible for the shipments of poisoned Jamaica ginger which paralyzed thousands throughout the country, the highest penalty that could be imposed was a $200 fine, a ridiculously inadequate figure. The present statute, in case of a second offense, provides for a fine not exceeding $300 or imprisonment for not exceeding one year. Chronic offenders under such conditions may readily regard a fine as merely a tax on continuing a profitable illegitimate business. The new bill imposes materially more severe penalties.

The bill retains the requirement of the present statute prohibiting traffic in foods which contain added poisonous ingredients which may render them injurious to health; or which may be filthy, putrid or decomposed; or which may be debased by abstraction of some valuable ingredient or admixture with some substance reducing quality or strength. It retains the United States Pharmacopoeia and National Formulary as the standards for the drugs named in those authorities, but strengthens and amplifies the existing provisions. It retains requirements for the declaration of certain habit-forming narcotic or hypnotic drugs in medicinal products and imposes the additional requirement that the label bear a warning statement that the product may be habit-forming.

While the new bill has been introduced, its serious consideration by Congress must await the next session. It is a measure drafted for public protection. Its eventual fate will depend largely upon a manifestation of public interest.

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## PROCEEDINGS OF THE ELEVENTH ANNUAL MEETING OF THE WOMAN'S AUXILIARY TO THE KENTUCKY STATE MEDICAL ASSOCIATION, HELD AT MURRAY, KENTUCKY, SEPTEMBER 11-14, 1933

(Continued from October Issue)

### ADDRESS OF WELCOME

**Mrs. E. B. Houston**

Madam President, Members of the Auxiliary and Guests: I come representing Murray and your host Auxiliary, the Woman's Auxiliary to the Calloway County Medical Society, and in their name I welcome you. There are present a number of the wives of Calloway County doctors. Also many of their mothers, daughters, and sisters are present this morning, and each of us most sincerely welcomes you to our town and county, which we are thoroughly convinced is, too, a part of God's country. Having been in all parts of our glorious State I readily understand how you from the mountains, you from the bluegrass, you from Louisville and Covington, and you from the Penny Rile can feel that God has been good to you. In fact, as good to you as He is to Indiana. If the author of the Indiana State poem had lived in Kentucky he would have as willingly said, "Ain't God good to Kentucky." It has been said that to appreciate anything one must see it and understand it. This applies to the State of Kentucky. I had seen the Rockies before I saw the Kentucky mountains; a mistake I'll agree.

This Medical Auxiliary is better acquainting our women with the beautiful scenery, the productive industries, the varied potentialities, and the great needs of our State. The needs for, not only more fully developed industries and better equipped farms and homes, but for a well rounded education for the children of our State embracing the mind, soul, and body. A child with a strong, well body can, with more effect, put over the dreams of a wide awake, creative mind and soul. I trust that through the influence of Auxiliary women, and other like bodies, health in a high degree will soon be the rule instead of the exception, and that we may accept good health as a living, constant fact for all citizens.

We, the women of Murray and Calloway County, recognize the importance of this meeting. We count ourselves fortunate to be hosts of an organization with such high ideals. We are glad of this opportunity to make for ourselves, our town and our county, new friends who we feel will be sympathetic and helpful. We welcome you to Murray and Calloway County hoping that you will note that in many ways we stand well abreast with other parts of the State, while in other lines we, like you possibly, need help and encouragement for fuller development. Calloway County leads the counties of the United States in champion Jersey cows. It takes second place in Kentucky in the production of dark tobacco. A large per cent of our people own their homes. The rural and high schools of Calloway are progressive. We are happy to have in the confines of our county this beautiful State Teachers College with its splendid faculty and its large student body. On this campus you will find a memorial to Nathan B. Stubblefield located just across the street from his old home-site where the elements that produced radio were first assembled by him in the year 1892. We believe that you will find the town of Murray is a good average in most everything for its size and population. We prize our churches, our citizenry, our schools, our hospitals, our stores,

our factories, and the livable homes of most of our inhabitants. We are so glad that you have come to be with us in our home section.

Madam President, you and all your delegates, alternates, members, and guests, make us happy by your presence.

Mrs. Bartlett, we know and feel deeply that we are honored by your presence as a member of our National Executive Board.

Will each of you feel free to ask for what you need that is not supplied. After you have listened in and absorbed the many good things this State Auxiliary program has in store for you, will you not come into the open and, on this spacious campus, relax together? Get acquainted with those whom you have not met. One of the advantages and beauties of Auxiliary work is that it finds for us many lovely friends, women whom it is such a privilege and pleasure to know. It has found many such for me.

May I sum up this welcome in conclusion by saying: Murray and Calloway County want to do the big things and the splendid things for you if only we may.

We'd like to brush the gray from out your sky
and leave it only blue.
We mean to say the kindest things that are
so much **preferred.**
We hope that we may stir your souls the way
your presence our souls has stirred.

Auxiliary Guests, Murray and Calloway County welcome you.

## ADDRESS OF WELCOME

**Miss Jincy Hunt, Mayfield**

Madam President, members of the Woman's Auxiliary to the Kentucky State Medical Association and visiting friends: It is indeed a privilege to have the honor of bringing you a few words of welcome from Western Kentucky. I don't know why I was given the honor unless it is that I'm being compensated for the many times I ran up and down steps answering the telephone in my childhood—a childish habit which still clings to me, by the way—and for the many times I have served in the capacity of chauffeur on country calls. However, I think the glory was really thrust upon me rather than achieved.

Not being accustomed to speaking on such momentous occasions, I feel very much like Mr Jones did when he was making an ocean voyage with his wife and son, Willie. Both Mr. and Mrs. Jones were rather upset by the various motions and rocking of the boat, but little Willie was feeling great and making himself quite a nuisance among all the other passengers. Mrs. Jones turned wearily to Mr. Jones and said, "Father, speak to Willie!" Mr. Jones looked around and said, "Howdy Willie!" Not being sea-sick, but only a bit stage-struck, I'll amend his statement to a most cordial "How-Do-You-Do," and say that we are delighted to have you with us, and we do extend you a hearty welcome from all of Western Kentucky. We are proud to have such an august body of men and women gathered here in our section of the state.

While looking through the September issue of the Kentucky Medical Journal recently, I came across an article on Dr. Joseph N. McMcCormack who was instrumental in the founding of the Journal and who attained a national reputation for his work in sanitation and public-health. He has been called the pioneer sanitarian, not only of Kentucky, but of the United States, and we might well say, a crusader in preventive medicine. He left as a heritage his son, Dr. A. T. McCormack, who is now carrying on his work in a most commendable way. He and Mrs. McCormack have been untiring in their efforts to organize our Woman's Auxiliary and getting it to function properly. We are very happy to have them at these meetings, and wish to take this opportunity of thanking Mrs. McCormack for her work in Western Kentucky during the past year.

Perhaps this is the first time some of you have been down to Western Kentucky. We want to give you a special welcome, and remind you of the fact that to Eastern Kentucky's coal mines and mountains, and to Central Kentucky's bluegrass, must be added the fertile valleys of the Western part to make the complete whole—the grand ole State of Kentucky.

Some one has written a poem about our State setting forth the characteristics of each section and making general statements which apply to the whole. It reads in part:

The moonlight falls the softest, in Kentucky
The summer days come oftest, in Kentucky
Friendship is the strongest,
Love's light glows the longest,
Yet wrong, is always wrongest, in Kentucky.

The songbirds are the sweetest, in Kentucky
The thoroughbreds are fleetest, in Kentucky
Mountains tower proudest,
Thunder peals the loudest,
The landscape is the grandest,

And politics the—well, we all know what politics have been in Kentucky. But—we have gathered here to promote the Auxiliary organization through study and discussion, and to mingle socially with each other and become better acquainted with all the members of the organization. We of Western Kentucky welcome you with open arms and assure you that we shall endeavor to make your visit both profitable and pleasant. We trust that you will derive benefit and enjoyment here equal to our pleasure in having you with us.

### IN MEMORIAM

Because I have loved life, I shall have no sorrow to die.
I have sent up my gladness on wings, to be lost in the blue of the sky.
I give a share of my soul to the world where my course is run.
I know that another shall finish the task I must leave undone.
I know that no flower or no flint was in vain on the path I trod.
As one looks on a face through a window, through life I have looked on God.
Because I have loved life I shall have no sorrow to die.

—Amelia J. Burr.

'Tis a wonderful thing to be capable of loving life to the extent of unselfishly giving of one's time and talent, using one's knowledge, ability and sympathy to further the happiness and well being of others.

Today, we pause for a moment to do honor to the memory of our National President of the Woman's Auxiliary, Mrs. Walter Jackson Freeman. We realize that we have lost not only a leader but an understanding friend.

Energetic and forceful, with a will to press onward, her example of purposeful endeavor will ever be, to us of lesser vision, an inspiration to reach new and unknown heights.

God in his wisdom has not left to us to decide when our last days here will be finished, but He has given to us an appreciation of a beautiful life of service.

In our own Kentucky Auxiliary, the call has come to some of our members. In Nelson County, Mrs. Mary Ann Flaherty; in Jefferson County, Mrs. Vance Q. Rawls.

We, the members, are the warp and the woof that go to make up the pattern of our organization. May we, too, grow into a greater understanding. May we each be strengthened to finer effort that we may do our part however small, to continue with the tasks that have been left to the capable leadership of our County, State and National Presidents.

(Mrs. N. A.) Mabel R. Jett.

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### CORRESPONDENCE REPORT OF THE PRESIDENT AND CORRESPONDING SECRETARY

Our work has included the writing of numerous personal letters and of form letters together with the mailing of reports, bulletins, handbooks, etc.,

Listed in our correspondence is the following:

| | |
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| Form letters and list of officers and chairman sent to A. M. A. Executive board members, following the State Annual Meeting in October | 27 |
| Form letters to Presidents of County Medical Societies, Dec. 8 | 95 |
| Form letters to Presidents of County Auxiliaries, Nov. 3 | 8 |
| Form letters to Presidents of County Auxiliaries, Nov. 26 | 8 |
| A. M. A. News letter, "Freeman Memorial Number," sent to officers, State Chairman and County Presidents, Dec. 22 | 29 |
| A. M. A. Hand books and Minutes of the A. M. A. 1932 Annual Meeting, Jan. | 29 |
| Form letters to the Presidents of County Auxiliaries, Feb. 20 | 8 |
| Form letters to the Presidents of County Auxiliaries, May 10 | 8 |
| Letters and Credentials to the Delegates for A. M. A., May 4 | 4 |
| Call to the Annual Meeting sent to the Wives of Kentucky Physicians, July 10 | 630 |
| Letters and Credentials for Officers and Delegates for the State Annual Meeting July 19 | 57 |
| The number of personal letters has not been recorded. | |
| Total | 903 |

Respectfully submitted,

(Mrs. A. T.) Jane Teare McCormack,
President.

(Mrs. J. W.) Ida B. Sams,
Corresponding Sec'y

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### REPORT OF PUBLIC INSTRUCTION COMMITTEE

As State Chairman of your Public Instruction Committee, I am pleased to submit the following report for your consideration.

Facilities used to disseminate public instructions this year have varied. They may be classed under such heads as:

1. National and State Study Courses.
2. Bulletins and leaflets.
3. Kentucky Medical Journal and The Quarterly.
4. Health questions with answers and health quotations in county papers.
5. Auxiliary members putting on health programs and contacting other organizations of women.
6. Securing subscriptions to Hygeia and distributing copies of this publication miscellaneously.

On April 15, 1933, we mailed to the nine members of the Nelson County Auxiliary, nine packages containing the National Study Courses and the State Board of Health Bulletin, of September, 1931, containing the Medical and Health Laws of Kentucky.

On April 15 we mailed to sixty-nine different colleges, institutions, academies, and high schools envelopes containing the National Study Courses and other health material.

In return for this service I received thanks

together with inquiries for additional health publications. Requests for public instruction literature and plans for study have come from our County Auxiliaries in the State In each case I have replied and given the requested information.

I deem it appropriate to bring to you in this report the recommendations of our National Health Education or Program Committee as set forth on page 36 in the Hand Book for State Auxiliaries.

1. Study Public Hygiene. Under which head is covered; (a) Statistics, (b) The State Health Department, (c) The Value of the Public Health Nurse, (d) The County Health Unit (e) Milk, (f) Housing, (g) General Sanitation.

2. Study Personal Hygiene. Subheads being: (a) Parental Care, (b) Child Welfare (c) Health Regulations, (d) Periodical Health Examinations, (e) Control of Communicable Diseases.

3. Community Cooperation. Study and help to put into action community cooperation in the promotion of better health for all our people.

Personally I want to recommend that each Kentucky doctor's wife, mother, sister or daughter be diligent in their request that her doctor deliver four times per year to her **The Quarterly**, which is mailed out with the doctor's Kentucky Medical Journal. Read this delightful little magazine, edited by Mrs. A. T. McCormack with help from other state members, and you will appreciate more fully and cooperate more readily with the program of the Kentucky Medical Auxiliary. In order to contact more closely our National Organization, read the pages edited by the Press and Publicity Chairman of the Woman's Auxiliary to the American Medical Association. These appear in the American Medical Association Bulletin received by your doctor every month if he is a Fellow of that organization. If he does not bring this bulletin to the home, go to his office and get it. You will enjoy and be benefitted by these articles and will be enriched by your acquaintance with the women throughout the nation who write for this publication.

I have for distribution at this meeting, National leaflets and National study courses which will, if read, prove helpful to you. Will you not please take one of each of them and, after reading, pass them on to others, thereby helping to create a public sentiment for better health? Do you not believe that it behooves us all to put some effort into making this world a better place in which we, and those after us, must live?

No one method alone can develop a health consciousness in a community, but the sum total of all vehicles for health education, if facts are correctly and convincingly presented, will be the means of promoting health through a well informed public. In the words of Abraham Lincoln, "Public sentiment is everything; with public sentiment nothing ran fail, without it nothing can succeed." Will you not rally to the cause of creating a public sentiment for better health?

Respectfully submitted,

(Mrs. E. B.) Jessie Houston, Chairman.

## REPORT OF RADIO COMMITTEE

In the work of the Radio Committee for the year 1932-33, we have attempted to keep alive the spirit of progress typical of the Woman's Auxiliary.

Radio station WPAD Paducah, Station WCKY Covington, and Station WFIW Hopkinsville, have had "Health Talks" sent them each month of the year, the time of broadcasting being the last Thursday of the month. They have reported favorably on the Talks and given us their loyal support. We have attempted to keep in our files the papers of seasonal and local interest and also such as would be of special interest to mothers, teachers and others concerned with the everyday health problems.

At the time of the State Medical Association meeting in Louisville October 1932, Radio Station WLAP, kindly invited the Auxiliary to arrange for a "message" from the Medical Association as well as the Auxiliary. This was done and Dr. P. F. Barbour, President of the Kentucky State Medical Association, introduced by Mrs. W. M. Martin of Harlan, Kentucky, and Mrs. A. T. McCormack, President of the Woman's Auxiliary, introduced by Dr. V. A. Stilley of Benton, Kentucky, were "on the air" to tell the radio audience of the work and aims of their organizations. We were also honored by having a radio message from our guest, the late Mrs. Walter Jackson Freeman, President Woman's Auxiliary to the American Medical Association.

It was a pleasure to have the winner of the Jane Todd Crawford Essay Contest, Samuel J. Spalding, Jr., a Senior in St. Augustine's School at Lebanon, broadcast his essay over WHAS, on Monday, June 15. He was presented by Mrs. O. M. Crenshaw of Lebanon, following the introduction by Mrs. George A. Hendon, State Chairman of the Jane Todd Crawford Memorial Project.

The University of Kentucky is now broadcasting educational programs to the more isolated parts of Kentucky where they have placed receiving sets. An effort was made to have them include, as part of their program, health talks furnished by the Auxiliary. They assured us of their interest and said they would be glad to cooperate with us if we could arrange to have the papers given by the physicians in person. This will be a worthwhile problem for the Radio Committee in their next year's work.

It is with regret that we must report that in November, 1932, Jefferson County Auxiliary

went "Off the Air," after having broadcast so successfully for almost three years. Many people have urged that these splendid talks from the physicians be made available to them again, and it is hoped that it will, in the near future, be possible for Jefferson County Auxiliary to resume Radio work.

Radio station WPAD Paducah, has generously given us time to broadcast a message from the President and the President-Elect of Kentucky State Medical Association, also the President and the President-Elect of the Woman's Auxiliary, at the time of the meeting in Murray. This will no doubt be greatly appreciated and enjoyed by the radio audience of WPAD, and will be a fitting climax to our year's radio work.

Respectfully submitted,
(Mrs. J. L. ) Marie Jones, Radio Chairman

## REPORT OF TUBERCULOSIS COMMITTEE

At the opening session of the 10th Annual Meeting of the Woman's Auxiliary to the State Medical Association, the following recommendation was made by the Advisory Council as recorded in the minutes found on page 15 of the January Quarterly;

"The only suggestion from the Council for new work this year, is that the Auxiliary interest itself in the problem of Tuberculosis in Kentucky; study to learn the facts and assist, to the best of its ability, the Kentucky Tuberculosis Association in its work of prevention and amelioration."

The objectives of this new committee, as understood by your Chairman, were to:

1. Interest Auxiliary members in Tuberculosis.
2. Help increase sale of Christmas Seals.
3. Educate the public in the prevention of Tuberculosis.

I sent out a form letter on January 6th to the County Presidents, presenting the program of work and urging them to appoint Chairmen for this work in their Auxiliaries with the following appointments resulting: Jefferson County, Mrs. R. H. Hudson; Marshall County, Mrs. S. L. Henson; Nelson County, Mrs. L. B. Summers; Perry County, Mrs. D. D. Carr.

A beginning in our work for the sale of Christmas Seals was made in several counties where we co-operated with local groups or committees already functioning.

I was able to give the Executive Secretary of the Kentucky Tuberculosis Association a list of names of new people to help put over the Seal sale where no Auxiliary existed.

An Essay Contest for the schools was outlined from material contained in the Study Course in the Medical and Health Laws of Kentucky. Outstanding in results is the work of Perry County, where the Auxiliary and Medical Society worked together. Three representatives from each formed a joint committee and created a lot of interest in the schools. First prize essays on the subject of Tuberculosis in the Hazard High School and grade schools have been published in the local newspaper. As another result, Perry County Medical Society has done some excellent work in stimulating State-wide interest in Tuberculosis.

This type of cooperation between the Medical Society and the Auxiliary represents the acme of perfection.

May we hope for many such reports for '33 and '34.

Respectfully submitted,
(Mrs. J. D.) Lora Lee Gibbs, Chairman.

## REPORT OF THE JANE TODD CRAWFORD MEMORIAL COMMITTEE

Starting from the last Annual Meeting of the Woman's Auxiliary which was held in Louisville October 3-6, 1932, our first work on the Jane Todd Crawford Memorial Project was a presentation of the subject before the meeting of the Fourth District Federation of Women's Clubs of Kentucky, held at Shepherdsville on Friday, October 21st, to a large attendance of members and friends, resulting in many inquiries, and a motion made and carried that one Jane Todd Crawford Program during the year be sponsored by the various clubs.

On November 9th, I attended a meeting of the Ripley-Decatur County (Indiana) Medical Societies, which were entertained by their Auxiliaries, at Osgood, Indiana, and there told the story of our pioneer heroine of Surgery, Jane Todd Crawford.

On January 31st, 1933, at the Brown Hotel in Louisville, The Jane Todd Crawford Trail Association was permanently formed, to work in conjunction with the Auxiliary, the object of which is to memorialize Jane Todd Crawford's contribution to surgical relief of human suffering for future generations through the experimental ovariotomy operation, and to familiarize the story to all travelers over this historic road, The Jane Todd Crawford Trail, which extends from Greensburg to Danville, passing through Green, Taylor, Marion and Boyle Counties.

At the Annual Meeting of the Kentucky Federation of Women's Clubs held in Lexington, on May 13, 1933, the following Resolution was unanimously adopted:

"Whereas, the Jane Todd Crawford Trail Association, recently organized by the Kentucky State Medical Auxiliary, for the purpose of recognizing the beneficial heroism of Mrs. Jane Todd Crawford, who, by submitting to an experimental ovariotomy in 1809 under the skillful hand of Dr. Ephraim McDowell, did bring to women throughout the world relief from untold suffering, and

Whereas, the Jane Todd Crawford Trail Association is attempting to properly mark and

beautify the Trail by planting trees and shrubs along the entire route; Now, therefore

Be It Resolved: That the Kentucky Federation of Women's Clubs, in accord with this movement to honor our pioneer heroine, extend its approval and recognition to the Jane Todd Crawford Trail Association."

On June 3rd, I attended a Book Lovers' Tea held in the Jane Todd Crawford Memorial Library which is located in the old Court House, Greensburg, the object of which was to stimulate interest in the Project and to increase the number of books so necessary in a Circulating Library. The various Auxiliaries throughout the State were invited. Six Counties were represented and the Library was augmented by the addition of 125 books.

In the early Spring an Essay Contest was developed for the schools of Green, Taylor, Marion and Boyle Counties through which the Jane Todd Crawford Trail passes, to acquaint the younger generation with the cause and purpose of memorializing the road known as the Jane Todd Crawford Trail. The first prize Essay received was from Marion County where nine schools competed. We expect the Contest to be resumed upon the opening of schools this fall.

Some historical data on Jane Todd Crawford and her family has been discovered, and we feel we have made progress this year.

Respectfully submitted,

(Mrs. George A.) Jessie P. Hendon.

## REPORT OF ORGANIZATION COMMITTEE

At the last meeting of our State Auxiliary it was decided that we abolish the use of Councilors in the State and give their work to the four Vice-Presidents.

The State was divided into four Districts as follows:

### First District

Mrs. J. R. Pryor, of Mayfield, Fourth Vice-President.

This District is composed of the following thirty counties:

Ballard, Butler, Caldwell, Calloway, Carlisle, Christian, Crittenden, Davies, Fulton, Edmonson, Graves, Hancock, Henderson, Hopkins, Hickman, Livingston, Logan Lyon, Marshall, McCracken, McLean, Muhlenberg, Ohio, Simpson, Todd, Union, Warren, Webster and Trigg.

### Second District

Mrs. C. G. Arnold, of Louisville, First Vice-President

This District is composed of the following thirty-three counties:

Allen, Adair, Anderson, Bowen, Boyle, Breckenridge, Bullitt, Casey, Clinton, Cumberland, Franklin, Grayson, Green, Hart, Hardin, Henry, Jefferson, Larue, Lincoln, Marion, Meade, Mercer, Monroe, Metcalfe, Nelson, Oldham, Russell, Shelby, Spencer, Taylor, Trimble, Washington and Wayne.

### Third District

Mrs. Luther Bach, of Bellevue, Second Vice-President

This District is composed of the following twenty-nine counties:

Bath, Boone, Bourbon, Bracken, Clark, Campbell, Carroll, Estill, Fayette, Fleming, Gallatin, Garrard, Grant, Harrison, Jessamine, Kenton, Lewis, Madison, Mason, Menifee, Montgomery, Nicholas, Owen, Pendleton, Powell, Robertson, Rowan, Scott and Woodford.

### Fourth District

Mrs. S. B. Snyder, of Hazard, Third Vice-President

This District is composed of the following twenty-nine counties:

Bell, Boyd, Breathit, Carter, Clay, Elliott, Floyd, Greenup, Harlan, Jackson, Johnson, Knott, Knox, Laurel, Lee, Leslie, Letcher, McCreary, Magoffin, Martin, Morgan, Owsley, Perry, Pike, Pulaski, Rockcastle, Whitley and Wolfe.

On November 5, 1932, a letter was sent to each Vice-President and a list of the counties composing her district, asking her to co-operate in the work of Organization, requesting her to write to the Secretary of each Medical Society in her district regarding the organization of a Woman's Auxiliary in his counties.

Later a letter was sent containing the following questionnaire:

Number of Counties in your District?
Number of Medical Societies?
Number of letters you have written?
Number of answers received?
Number of Auxiliaries in your District?
Number of new ones organized?
Number of new members this year?
Number of members paid dues this year?
Number of deaths and who?
What is the total membership in your District?

The following reports were received.

Mrs. Pryor of District No. 1.

| | |
|---|---|
| Number of Counties in First District | 30 |
| Number of Medical Societies | 26 |
| Number of letters sent | 12 |
| Number of answers received | 5 |
| Number of Auxiliaries | 3 |
| Number of new Auxiliaries | 0 |
| Number of new members | 0 |
| Total membership | 30 |
| Number of members paying dues | 24 |
| Deaths | 0 |

Of their total membership, six are members of State at large.

Mrs. C. G. Arnold, First Vice-President, District No. 2.

| | |
|---|---|
| Number of Counties in Second District | 33 |
| Number of Medical Societies | 32 |
| Number of letters sent | Several |
| Number of answers received | 4 |
| Number of Auxiliaries | 3 |
| Number of New Auxiliaries | 0 |
| Number of new members | 10 |
| Honorary members | 2 |
| Number of members paying dues. Nelson 9, Jefferson 165 | 174 |
| Number of deaths. Nelson 1, Jefferson 1 | 2 |
| Total membership. Nelson 9, Jefferson 237 | 246 |

Mrs. Luther Bach, Second Vice-President, District No. 3.

| | |
|---|---|
| Number of Counties in Third District | 29 |
| Number of letters written | 30 |
| Number of answers received | 4 |
| Number of Auxiliaries | 1 |
| Number of new Auxiliaries | 0 |
| Number of new members | 1 |
| Number of deaths | 0 |
| Number of members paying dues | 24 |
| Total membership | 24 |

Mrs. S. B. Snyder, Third Vice-President, District No. 4.

| | |
|---|---|
| Number of Counties in Fourth District | 29 |
| Number of Medical Societies | 27 |
| Number of letters sent | 0 |
| Number of answers received | 0 |
| Number of Auxiliaries | 1 |
| Number of new Auxiliaries | 0 |
| Number of new members | 4 |
| Number of deaths | 0 |
| Number of members paying dues | 31 |
| Associate members | 5 |
| Honorary members | 1 |
| Total membership | 37 |

Personally, I wrote to every Secretary of the Auxiliaries we have had listed since the organization of the Auxiliary, trying to have them reorganize where inactive but received no encouragement from any of them. Some of the members of these defunct organizations are now members at large in the State.

Grant County gave promise of organizing an Auxiliary in the near future; others felt that the time was not propitious for any new work.

**Summary**

| | |
|---|---|
| Number of active Auxiliaries | 8 |
| Number of new members | 16 |
| Number paying dues (in Co. Aux.) | 253 |
| Number of total members | 332 |
| Number of Honorary members | 3 |
| Number of Members State at Large | 22 |
| Number of deaths | 2 |

Respectfully submitted,
(Mrs. B. K.) Emma Menefee,
Chairman of Organization

## REPORT OF THE MILWAUKEE MEETING OF THE WOMAN'S AUXILIARY TO THE AMERICAN MEDICAL ASSOCIATION

**Mrs. B. K. Menefee, Covington, Delegate**

The Woman's Auxiliary to "The American Medical Association" held its Eleventh Annual Meeting in Milwaukee, June 12 to 16, 1933, with Headquarters at the Hotel Phister. The Management was very generous with space, allowing the use of the entire seventh floor, for Registration, Exhibits, Special Meetings, Luncheons and Banquets and the Roof Room for the Sessions.

Milwaukee ranks second in this country as a Convention City. It has a population of about 600,000 and a Lake Front of over 6½ miles with beautiful parks and drives. It is divided east and west by the Milwaukee River and there are many beautiful Lakes within the city, so it rightly deserves the name of Milwaukee, the Indian interpretation of which is "The Gathering of Waters."

Besides that which years ago made the city "Famous," it has many attractions, a great number of churches, universities, public buildings, handsome homes, wide well-paved streets, one of which has a Court of Honor four squares in length, dedicated to World War Veterans, with statuary and planting of trees and shrubs. There are 68 beautiful parks open winter and summer for recreational purposes.

The City officials boast that they have less delinquency than any other city. They attribute this largely to the care and training given to the children who have free use of the sixty-eight parks. School houses are equipped with recreation rooms that are open at all times where the children and young folks are furnished entertainment outside school hours under strict supervision. Here the parents may come and enjoy the evenings with their children.

Milwaukee also boasts of freedom of "Gang Law" and of a well governed city.

We found the people friendly, hospitable and very congenial; also tireless in making our stay a pleasant one, so that we were very reluctant to leave when our meeting closed.

**Monday, June 12, 1933**

A Preconvention Board Meeting was held in the parlors of the Hotel Phister, the President, Mrs. James F. Percy, presiding.

At 7:00 P. M. dinner for the members of the National Board and the delegates to the Woman's Auxiliary of the American Medical Association was given at the Woman's Club of Wisconsin, one of the city's most exclusive clubs. This was followed by a wonderful Musical Program, furnished by artist members of the Auxiliary to the Medical Society of Milwaukee County.

**Tuesday, June 13, 9:00 A. M., Roof Garden Hotel Phister**

The general meeting was called to order by the President, Mrs. James F. Percy.

Invocation was given by Rev. William M. Magee, President of the Marquette University.

Adress of Welcome given by Mrs. Fred Nause, Jr. of Wisconsin.

Response by Mrs. Southgate Leigh of Virginia.

**In Memoriam**

Mrs. Augusta S. Kech of Pennsylvania paid a beautiful and loving tribute to our late President, Mrs. Corrine Keen Freeman, designating her a woman of the people, a tireless worker, a wonderful guide, a light that could not be hidden.

Mrs. Rudolph F. Teschen sang, "God Himself shall call thee when the roses bloom," accompanied by Mrs. Joseph Tolan on the piano and Mrs. Benjamin Leibman on the violin. A moment of silent prayer was held for Mrs. Freeman, whom to know was to love and we feel that her wish would be, for those who follow to go forward.

Committee on Credentials and Registation reported 466 registered.

Roll was called and reponses were heard from thirty-three states.

Minutes of the Tenth Annual Meeting were read and approved.

The President, Mrs. James F. Percy, made a splendid report. She had travelled 4,200 miles, received much encouragement while visiting in many states, found Auxiliaries co-operating with Doctors and helping to spread a better understanding to the laity of health, and the laws governing it, expressed thanks to Mrs. Hunsberger, Mrs. McGlothlan and Mrs. Tomlinson for their help and support, called them "her Three Musketeers"; also thanked Mrs. Overholser for editing the News Letter and Mrs. Horace J. Whitacre of Oregon for the work of Organization.

In conference with the officers, reduced the

budget for the coming year and advised all the states to take similar action.

Praised the work of Mrs. Hunsberger and Mrs. McGlothlan, who prepared the Hand Book, the first edition of which was soon exhausted and another authorized, felt that great benefit has been derived from the use of these books and urged all Auxiliary officers to make a study of them, so that there may be a better understanding of our work.

Established a fund to be known as the "Corrine K. Freeman Fund," to be used by the President from year to year in an emergency when no other fund is available, amount used to be returned as soon as possible from the general fund so as to keep this a perpetual fund. It originated from funds sent by State Auxiliaries and friends to buy flowers at the time of Mrs. Freeman's death. The amount received was so great that after suitable tributes had been sent there remained $230.00 and this amount was set aside as a memorial to be known as "The Corrine K. Freeman Fund."

A gift of $250.00 was given Mrs. Percy by the Medical men of California for use during her term. Pennsylvania also contributed during the year so that gifts amounting to $550.50 were received.

[Continued In April Number]

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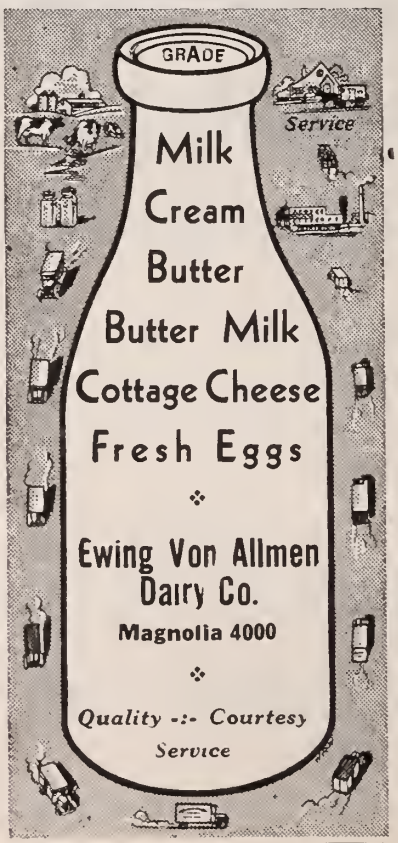
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ANNUAL MEETING
CLEVELAND, 1934

1933-1934

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SAN ANTONIO, NOVEMBER, 1934

1933-1934

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KENTUCKY MEDICAL JOURNAL—PART II

WOMAN'S AUXILIARY SECTION

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# THE DOCTOR

By

Sir Luke Fildes, R. A.

APRIL, 1934

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# Woman's Auxiliary
## TO THE
# Kentucky State Medical Association
## 1933-1934

ANNUAL MEETING, HARLAN, OCTOBER 1-4, 1934

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## SAFEGUARD WITH DUPLICATE COPIES

Over half the material prepared for this issue was lost in the mails. Much of this cannot be recovered. Included in the package (sent first class with return address properly placed) were items of current interest from the County Auxiliaries listed for publication under the title, "News From the Counties." No duplicate copies were available so these items cannot be given until fresh copy is submitted. Will the County Chairmen kindly send the Editor another copy of the news intended for this issue so that it may be added to the items for the July issue? And—please keep duplicate copies as a precaution against another such calamity.

## THE PRESIDENT'S MESSAGE

**Mrs. B. K. Menefee, Covington.**

"Time Flies." How true these words! Three months have passed and we come again to greet you one and all, thankful the hard, cold winter is over and that the lovely Spring months are at hand when all Nature is awakening, taking on new life and beauty. What an inspiration this should be to us! May we take up our work with renewed courage and activity. Although progress seems slow, we must be willing to sow the seed where, and when, we can and be willing to await the results of our labor.

There have been some splendid reports to date and we hope each Auxiliary will do all in its power to make our year a success, remembering, "The way to great things lies along the path of little things."

We want to have a splendid report of our work in Kentucky for The Woman's Auxiliary to the American Medical Association, at the Annual Meeting which is to be held in Cleveland, Ohio, June 11-14, plans for which are well under way.

We hope our State will be well represented at this meeting. Our organization depends greatly upon the interest we have in health work and all that pertains to improved methods of teaching health education. The helpful ideas we receive at our National Meeting will broaden our scope of usefulness and awake in our hearts and minds the desire to do more and better work in our local Auxiliaries.

Many complimentary letters have been received in regard to the Kentucky Medical Journal—Part II—Woman's Auxiliary Section. We certainly owe a debt of gratitude to Mrs. A. T. McCormack, our Editor; Mrs. Peter Guntermann, Business Manager; and also to those who have labored with them to finance this publication. What has your Auxiliary done to help? Will you try to help?

How proud we should be of the interest Dr. C. C. Howard, President-Elect of the Kentucky State Medical Association, has displayed in the Jane Todd Crawford Project. I hope many of our Members have had the pleasure of hearing the lecture he has prepared, in which he gives some very interestng facts in regard to our heroine. At a great amount of trouble and expense, he has had a picture made of her from a copy of Goldsmith's picture of the operation. This, and others, he uses to illustrate his lecture. We are deeply grateful to Doctor Howard for this picture and all he is doing to help us in this matter.

The lecture was given before The Campbell-Kenton Medical Society and several of the members have told me that they now have a better understanding of our aims since hearing Doctor Howard.

# -:- EDITORIALS -:-

## THE DOCTOR

The human touch, so beautifully demonstrated in the ideal relationship between physician and patient, is impressively emphasized in the famous painting, "The Doctor," by Sir Luke Fildes, R. A. Painted in 1892, the original of this well-known picture hangs in the Tate Gallery in London. It was reproduced on canvas by Joseph Tomonek in 1933.

According to a recent account, the picture shows a scene in a forester's cottage on the Braemar Estate, North Scotland, where Balmoral Castle is situated. The time is that of "Victoria the Good." The woman in the picture had been an old and favorite servant of the Queen.

After many years of married life, this little child came to them. She was stricken with a serious illness. The Queen telegraphed to London for her own physician. He came by special train and remained in constant attendance until after the crisis.

The child recovered and later the Queen requested the artist to paint the scene in commemoration of the faithful devotion of the physician.

For the privilege of reproducing, in black and white on the cover of this issue, a minature of this famous painting, we wish to express our appreciation and gratitude to Petrolagar Laboratories, Inc., of Chicago. Many Auxiliary members who visited A Century of Progress, Chicago, during the summer of 1933, were deeply impressed by the Petrolagar Exhibit in the Hall of Science. Here, in beautiful and realistic colors, a reproduction of this painting was shown in the life-size, life-like new art form of "Sculpticolor," modeled by John Paulding, sculptor, and then cast. Rudolf Ingerle, artist, applied the color, The entire reproduction is 11 feet high, 15 feet long and 9 feet in depth. This "sculpticolor" reproduction was dedicated by Petrolagar to that friend of all mankind whom we, too, love and honor.—The Family Doctor.

## A. M. A. ANNUAL MEETING

The Annual Meeting of the American Medical Association and its Woman's Auxiliary will be held at Cleveland, Ohio, June 11-15, this year. It is hoped that many Kentucky Auxiliary members will attend, along with their husbands, and profit much from the interesting, instructive programs of the conference meeting. Delightful entertainment is being planned for the hours of relaxation, before and after the general business sessions. Auxiliary members should register at Auxiliary Headquarters as soon as possible after arrival so that they will be sure not to miss a single thing on the Auxiliary program.

## HAIL MISSOURI

All Hail Missouri! Missouri has another distinction, recently added to its fine record. It is the publication of The Quarterly Bulletin of the Woman's Auxiliary to the Missouri State Medical Association. Volume I, Number 1, made its debut in January, 1934, during the administration of State President, Mrs. Hudson Talbot, St. Louis, Mrs. Milton P. Overholser, Harrisonville, State Chairman of Press and Publicity, is the Editor. Auxiliary members, all over the country, are familiar with the excellent editorial work of Mrs. Overholser found in the Auxiliary News Letter of the National Body during 1931 and 1932, and will confidently prophesy that this new venture of the Missouri Auxiliary is destined for a successful career. Financed entirely by advertising, it presents, in its first appearance, a modest four page bulletin filled with Auxiliary interests. It is published by the Auxiliary, alone, separate and apart from the Missouri State Medical Journal, in which the Auxiliary continues to carry a page or two of Auxiliary Notes.

## BIND TO SAVE

Bind your Quarterlies to save them. The four issues of each year make an attractive volume that will grace any library, desk or bookshelf. And—this keeps the copies clean and together, ready for reference when needed. In later years, who knows how valuable our Quarterlies will be? They contain much that will be of increasing value from an historical standpoint. And, besides, think how thrilled your great-granddaughter will be to open one of these volumes, yellowed with age perhaps, and gasp with pride, "Why! See what Great-Grandmother did in the County Auxiliary! And, here she is a State Officer! Why, what do you think of this? She acted as delegate to the American Medical Auxiliary for their Annual Meeting! And, now I find her an officer in the Southern Auxiliary! Who ever said our Great-Grandmother did things, spoke the truth."

Housecleaning time is upon us and into the waste basket will go many odd and ends. But, rescue your copies of our quarterly supplement to the Kentucky Medical Journal, The Woman's Auxiliary Section, and send them to Mr. James Gibbs at the Gibbs-Inman Company, Louisville, and ask him to bind them in red to match the brilliant coat of the Kentucky Cardinal on the cover of the January issue, or choose some other color that best suits your taste. Gold lettering for the title at the top of the cover and your own name on the lower left-hand corner add distinction to the volume.

N. R. A. has raised prices for printing and

binding considerably. But, Mr. Gibbs has agreed to give us a special rate, providing, we have at least ten volumes bound at once. If ten friends will send their volumes (four copies each —January, April, July, October) at one time, the price will be $1.75. But, if one volume is bound at a time, the price will be $3.00. The reason a special rate can be given when ten or more copies are ordered is, that the one shifting and adjustment of the binding machinery, necessary for any size book, which costs so much in time and labor, can be made to serve for all of the lot. Here's a real bargain, you see!

And, while cleaning up the year's accumulation of magazines, etc., why not rescue husband's copies of the Kentucky Medical Journal, have these bound and surprise him with a new kind of birthday gift? He would appreciate this. All his, you know!

## SPRING CLEANING IN KOREA

Cleanliness, although attained through varying processes and by means of differing technique, means health and comfort to people in every land. In an illustrated 1931 calendar, Korean customs are graphically depicted and described by Dr. Shungnak Kim, a native missionary well-known in the United States as he spent about 20 years as student, lecturer, traveller in America. Here are shown many interesting contrasts in living conditions and we find that spring cleaning does not mean the same thing to our sister housewives of the Far East that spring cleaning means to us.

The following description accompanies a picture of a young girl and four women, one with a baby strapped to her back in Korean fashion as she stoops and bends to her work at the water's edge. This process of spring cleaning, said to be typical along all Korean rivers, takes place in a small stream of water below a native thatch-roofed cottage home nestled in a clump of shade trees on the bank.

"You Foreigners," Dr. Kim says, "lay so much stress on 'spring cleaning' that I thought you might like to see the way we do it! Last March, when I showed you the inside of a Korean home, you saw how simple is our life. Because we sit on the floor and sleep on the floor, we are bothered with very little furniture. Therefore, we do not feel the need of a regular spring cleaning; instead we have a spring clothes cleaning! As far back as our history goes, our national dress has been white. Because padded clothes have to be re-made every time they are washed, we have set times for doing it as you have for house cleaning. Now that the weather is warm, the women get busy again, unpad the clothes, wash them and sew them together without the cotton padding. We wear these two thicknesses during the changing weather of spring and fall. In this way, we change the weight of our clothes gradually. Here, you see the women hard at it. After beating awhile (with a stick as the clothes lay on a stone) they dip the clothes in the water and beat again. The little girl is carrying some washed clothes to the house to be boiled in lye water, and then she will bring them back to be beaten again. In the cities, as there are very few private hydrants, the women have to wash their clothes in cemented troughs around the public hydrants. Although more convenient, they are not nearly so artistic as our old rock wells around which the city women used to gather."

## PUBLIC RELATIONS

The public relations activities of the Jefferson County Auxiliary are being furthered by a series of Come-And-See Trips conducted by the Louisville Community Chest. Members are guided through the institutions and agencies, following a brief, condensed statement of the activities with special emphasis given on the services of physicians in each field. Clinics for well babies and demonstrations by boy and girl scouts and others add to the interest of these trips.

## CHATTING

**Mrs. John C. Rogers, Louisville.**

(With a "Curtsy" to and a Smile of Appreciation for our Advertisers.)

Mrs. Jim Jones (Mary) smiled happily as she added the finishing touches to the tiny pink flannel robe for the City Hospital Layette. The bit of hand-work in colored silk floss and the fluttering pink baby ribbon would endear the robe to the heart of any mother. "I wish all the world could know how truly wonderful this Sewing Unit is. It seems to me that 'The Forgotten Baby' has been beautifully remembered by the Sewing Unit."

Mrs. Jackson (Edna). Scissors flying. "Think back on all those sheets we made for the children's Free Hospital. On our way over here, Anna Brown and I drove into the Aetna Service Station for gas and oil at the same time. While waiting, we agreed that all of our bunch can do real work as well as play."

Mrs. Slocum (Amy). "Very true. However, anyone, seeing us pleasure bent, resplendent in our advanced spring toggery (Walsh and Jaglowicz) and manicured, marcelled and facialled by the Adornee Beauty Salon, could hardly picture us duty-bent—cutting, basting, hemming, quilting and running a half-dozen sewing machines as though our very lives depended on getting through before dark."

Mrs. Moon (Sally), "Who mentioned 'pleasure-bent?' Yesterday, for the first time in ages, we received a real invitation. I dug out my one formal and my husband's full-dress and found, to my horror, that the moths had been holding a National Convention in them." Momentarily,

laughter drowned out the whirr of the sewing machines and the clip, clip of the scissors.

Mary. "Moths must meet somewhere, poor things, but if you object, why not get the Louisville Chemical Company on the job? Moths and all pests vanish—Presto! for that firm."

Mrs. Stetson (Alice). Hostess for the day. "Lunch time. Come let's eat."

Mrs. White (Ada). "Well, here's another pair of operating pants finished for the hospital."

Work, temporarily forgotten, all rushed to the hospitably laden dining table on which reposed, in appetizing array, the goodies that the members had brought. In honor of good St Valentine's Day, a dozen exquisite red roses from Haupt's graced the occasion.

Alice: "Edna, pour tea, please. Amy, the coffee."

All at once: "Sewing makes me ravenous!" as they wend their way around the laden table, selecting tid-bits to fit the fancy of the most fastidious. "Do try one of these Honey Krust bread sandwiches filled with old ham. The real thing, Cadiz, Kentucky Ham." "Me for Deckel's home-made chicken salad and their mayonnaise is homemade, too." "Perfect." "I'm saving my big red apple to munch by the fire."

Mrs. Tom Brown (Anna): "Who mentioned a National Convention? When we stage a feast like this, for the sake of others, we ought to warn Denunzio, Maloney-Davidson, Louisville Grocery Company, and Sanders to keep stocked up, else there'll be a famine in town."

Mrs. Stone (Flora): "Who made this perfect Caramel Cake?"

Anna: "Donaldson's. It's great."

Sally: "More of those mouth-melting frosted graham crackers from Hampton's, please."

Amy (at the end of a perfect lunch): "If I eat any more, I'll be ill. The doctors have put Susan Gray to bed for a month to build up. But, the opposite treatment will be indicated for me. Poor bed-ridden Susie!"

Alice: "Not bad. A sympathetic friend gave Susie one of those handy Baker Bedside Tables from Theodore Tafel's. On this table, Susie can read The First World War by Stallings and Stop that Smoke by Obermneyer from The Wilderness Road Book Shop. And when industriously inclined, she can make those fetching designs from which Bush-Krebs makes the cuts for her book-plates. Everybody's making book-plates."

Amy: "I do not need my best friend to tell me I cannot design book-plates. But, I do have a bright idea once in a while. I am hostess next time. No one need bring lunch." (Shouts of joy rang out). "I am going to fry some of that incomparable Edromi Sausage and serve that delicious Edromi coffee and cook pan-cakes. Edromi means Imorde—Bright folks can figure that out."

Edna: "I'll bring enough of Ewing-Von Allmen's milk for the pan-cake mixture."

Ada: "And, I'll bring some cream from the Cherokee Sanitary Milk Co. for your Edromi coffee."

Mary: "I'll bring two pounds of that fine fresh butter from the Kentucky Dairies, Inc."

Mrs. Street (Mabel): "Mary can show Amy how to make that sea-dream lime jello salad."

Sally: "Yes, the kind Mary makes in her new Terstegge-Stratton Electric Refrigerator."

Mary: "I'm game. I can also make the best apricot ice cream! Well, here's another darling pink and blue baby quilt for the Hospital.

Ada: "Have you seen Young's Grocery display of vegetables, fresh daily? Beautiful as a flower garden! And—delicious when served."

Alice: "Let's gather around the fire and gossip. Where is the critter who suggested that an open fire might be messy? Stearns Coal burns like magic."

Mabel: "Hasn't this been the sootiest winter? I've kept Shrader's busy with our suits and coats. They get so smudgy."

Sally: "If I hadn't laid in a huge supply of Miller's Nibrock Towels, I couldn't have stood it. These towels do save so much washing and ironing."

Alice: "Oh! Ella will be back in time for Mattie Green's funeral at Cralle's. Mattie's own home is far too small to accommodate all the kin and friends who wish to attend."

Mrs. Thompson (Mildred): "You all really should see the beautiful monument put up to Dr. Green's memory by the Peter and Burghard Stone Company. A work of art."

Ada: "Let's all drive over the K. & I. Bridge when the tulips bloom and see that glorious sight near the river. 1000 bulbs were planted last fall." Here, a late member, Mrs. Hall, comes tearing in. All hail her with delight.

Mrs. Hall (Minnie): "I hurried over to show you all how beautifully bound my last year's Quarterlies are in this brilliant red cover. And, here's a bargain." All, at once: "A bargain! Speak."

Minnie, gleefully: "The Gibbs-Inman Company will bind your Quarterlies (4) for the year for only $1.75—providing ten of you will order at one time. Otherwise, it will cost you $3.00 if you ask to have your binding done individually. To get the binding machinery into working condition takes a good deal of time and labor for each type of book but when several are bound at one time the per capita cost is less. So—ten or more at one time may profit by the bargain price."

Mabel: "This is beautiful. I'm ready to be the first one. May I have mine bound in red

with the beautiful gold lettering like yours?"

Minnie: "Indeed, yes. And do decide soon, I knew you all would like mine!"

Mary, smiling: "Looks like there will be more then ten volumes of the Quarterly for Mr. Gibbs to bind at once. It's almost time for the Times-Journal Press to be working on our material for the April Quarterly!"

Ella: "Yes, and it's almost time for our little Easter baskets at the Hospital again."

Flora, rising: "Yes, and it's time for me to go. I must gather up my brood and take them to the Doctor's office for him to administer Gilliland's Diphtheria Toxoid to all of them and then—Goodbye, Worry!"

Silence and work for a time. Then,

Mrs. Carleton (Kate): "How fresh your curtains and draperies look, Alice!"

Alice: "The Swiss Cleaners are a joy to me. Some of you girls haven't spoken a word, today! How come?"

The silent ones, smiling: "Too busy to talk. And, then, we like to listen!"

Mabel: "No one has observed that I am working without being made to. Ever since Muth fitted me out with eye glasses I can sew the finest seam. And I like it."

Alice: "I was advised to go to the Southern Optical Company to get my "specs" made. Ever since I began wearing them, my headaches disappeared. Funny thing about it—I thought my eyes were O. K.! How little we know until a physician gives us a good, thorough inspection like a jeweler gives a watch!"

Flora, ready to leave: "Goodbye, girls. I'm driving to Bardstown and I'll pause at The Federal Art and Gift Shop. Such dainty handmade articles. Have to stop at Stoll's and get my car in condition. Tank must be filled with Diamond Gas and I need a tire check-up. See you soon again." Momentary silence, but for the whirring and clipping and snipping.

Carrie: "If any of you need to lift depression feelings, go to Berry's and have a minature made on porcelain. I did and I had not even dreamed I was so beautiful!" Chuckles and questions from all.

Flora: "Let's all go. I'd like to go down in history as ravishingly beautiful. I can see my miniature on my great-grandson's mantel-piece, right now! However, all's on my mind this minute is that I must order two quarts of certified milk for breakfast. Another bargain. Certified milk is now only 15c a quart, the lowest price in 15 years! Must hurry on."

Alice: "Yesterday, I visited the Medical Arts, Louisville Apothecary, Model Drug Stores and Newman's—restocking our bathroom medicine cabinet. If you run out of anything, some one is sure to get a pin-scratch or—"

Sally: "A black eye!"

Mabel: "Or, eat toad-stools for mushrooms!"

Anna: "Or, mix lobster and ice cream!"

Carrie: "There's my car at the door! Must fly! Next time we sew for the Susan Speed Davis Home." All had to fly! Work ceased Portable sewing machines were hastily detached, closed and gathered up by their respective owners. All sighed with joy and delight over the piles of beautifully finished work. Thanks for the good time, Alice, Goodbye! Goodbye! Goodbye! They'd see each other soon again at the Study Class! At the Luncheon! No, they wouldn't forget that Amy was to be the next hostess! There was a teeny breath of Spring in the air at last! Goodbye! Good Cheer! Goodbye! Good Cheer! Good Cheer!

## HISTORIAN'S CORNER

**Mrs. V. A. Stilley, State Historian**

ATTENTION COUNTY PRESIDENTS—Don't be forgetting the TREASURE HUNT, that is, the sketches of the pioneer doctors of your County. Many interesting biographies, stories and heroic deeds of these good, age old doctors are now in our files—not complete, no, not by half; your county has had doctors like these, we want something about every one. Just lately there was found a picture of the first appendectomy in Western Kentucky, a complete history of which we hope to give you later.

Did you attend the Murray Meeting and see the display in the Dale and Stubblefield Drug Company window of old instruments, pill makers, mortar and pestle used by pioneer doctors of Calloway County? We hope you did, as it was most interesting. Please hurry with your contribution. We are expecting to hear from you very soon.

## DR. WALTER BRASHEAR

Some new data secured by Mrs. L. L. Summers, Bardstown.

Dr. Walter Brashear was a direct descendant of Benjamin Brashear (orginal spelling of the name is Brasseuir) one of two brothers who came to Virginia from France in 1650 and who emigrated to Calvert County, Maryland, in 1658, where he was introduced as a former citizen of France by Cecilius Calvert. The Brasseuir homestead on the Patuxent shows its antiquity in the ancient graveyard known as "Brashear's Purchase." Those of the family who have died in Kentucky rest in what is known as "The Brashear-Crowe Burying Ground" near Chapeze, not far from Shepherdsville in Bullitt County, Chapeze was formerly called "Brashear," so named on the first map of Kentucky, the Brashear family having owned about 2000 acres of land around this place. Until about eight years ago, the old Brashear home was still standing but it is now in ruins.

# THE JANE TODD CRAWFORD MEMORIAL

**Where Dr. Ephraim McDowell Was Called To See Mrs. Jane Todd Crawford**



Courtesy of Dr. August Schachner, Louisville

HOME OF JANE TODD CRAWFORD IN GREEN COUNTY, KENTUCKY
1805--1810

Sketched by John Archie Mitchell (1850-1925) grandnephew of Jane Todd Crawford and Thomas Crawford; grandson of Rachel Crawford Mitchell and Thomas Mitchell; youngest son of Amelia Conn Mitchell and John Mitchell.

## JANE CRAWFORD'S HOME

Letter written, February 23, 1920, to Dr. August Schachner, Louisville, by Mr. John Archie Mitchell, grand nephew of Jane and Thomas Crawford. This letter accompanied a sketch Mr. Mitchell made of the Green County Home of the Crawfords, upon the request of Dr. Schachner.

"2-23-20

"Dr. Aug. Schachner

Dear Sir:

I fear this will not be of any service to you as it has been so long since I tried to sketch any. The branch and road run all along in front and the woods in the background and garden and grave yard. The front sloped down well to the road. The walls are of logs and pointed with lime.

Very Res.

J. A. Mitchell."



Courtesy Mr. R. C. Ballard Thruston

HOUSE NOW ON THE JANE TODD CRAWFORD FARM

Built by the Mottleys who bought the Crawford Farm, December 8, 1810.

## MEMORIALIZING HEROIC WOMEN

**Robert F. Moore, Memorial Artist**
**The Peter and Burghard Memorial Company**

There is no truer saying than: "Show me the memorials in the community and I will tell you what kind of a community it is." Travelers returning from every land, far and near, emphasize the beauty and outstanding characteristics of the memorials they have seen erected to heroic men and women, in acknowledged appreciation of some remarkable service or of some rare quality, by a discerning populace gratefully recognizing merit. One astonishing fact is everywhere evident. The memorials to women are few and far between. Why? Women have always dared. And, done!

Our great State of Kentucky is sadly negligent in giving merited recognition to both the men and the women who have made and developed this State. Especially is this true with reference to the women. How many memorials has Kentucky dedicated to women? We do a lot of talking about the valiant deeds of our forebears but, when we finish talking, what is there to show as a measure of our appreciation?




Courtesy of Dr. C. C. Howard

While enjoying the privilege of placing in position in the Rotunda of the Capitol at Frankfort, the fine monument memorializing that Nobleman of Pioneers, Dr. Ephraim McDowell, the writer could not help wondering just who was the real hero in that great episode: the active physician, alertly utilizing his wisdom, skill and courage, or, that quiet, brave patient, Mrs. Jane Todd Crawford perfectly conscious and with no alleviation whatsoever from anguish, voluntarily submitting her bruised body to the excruciating pain of a keen cutting knife in the great experiment which determined not only that she might live many more useful years but, also that succeeding generations might be helped and protected from needless suffering. And my decision, at length, was that both were equally required, that each was superb, that each was incomplete without the other. Yes. That memorial, deserving as it is, remains incomplete without a companion-piece for this heroic woman.

So far as the writer knows, the only memorial erected to the memory of this remarkable woman is the one shown on this page.* This memorial stands at the head of her grave in the obscure little Johnson Cemetery at Graysville, Indiana. Carrying only her name, the inscription of her birth and death, beneath which is inscribed, "Blessed are the dead which die in the Lord. Rev. 14-15.," this memorial tells nothing of the heroic deed performed by this noble pioneer.

Why do the public-spirited women of the world, particularly the women of this great Commonwealth, sit idly by, year after year, and fail to erect to this woman's memory a suitable memorial, in imperishable marble, stone or bronze, that will tell this amazing story to all who pause? This is an admirable objective for every group of women among whom, many have doubtless benefitted from Jane Todd Crawford's sacrifice on the altar of science, but particularly fitting for an organized body of the wives, daughters, mothers and sisters of physicians and surgeons.

(January 12, 1932, the highway connecting Greensburg and Danville, a part of which is now being built to complete the connecting link, was officially named The Jane Todd Crawford Trail as a memorial of the trip she made from her home near Greensburg to the home of Dr. McDowell in Danville where the memorable operation was performed, December 25, 1809. The Jane Todd Crawford Library, sponsored by the Greensburg Woman's Club, was opened in November, 1932. These are two Kentucky memorials. Editor's Note.)

## ARCHIVES! ARCHIVES!! ARCHIVES!!!

May we again make an earnest plea for newspaper clippings pertaining to Auxiliary activities in various parts of the state? We would be delighted to have a "shower" of this sort of publicity each month. Let's do things and have them mentioned in the local papers, and then send me two copies (if possible); one for our own State Scrap Book and one for the Regional Scrap Book of the American Medical Auxiliary to be exhibited at the annual meeting this year in Cleveland. I'm looking for your support. Please help.

(Mrs. George A.) Jessie P. Hendon.
Chairman.

# CHILD HEALTH AND WELFARE

Mrs. Philip Foster Barbour, Louisville, Chairman

## A LETTER FROM THE CHAIRMAN

Dear Wives, Mothers, Sisters and Daughters of the Kentucky Doctors:

Some of us cannot go to the State Medical Meetings and Auxiliaries; nor can we always attend the Woman's Clubs and their program meetings. Some of us feel the need of contact with congenial souls, who have the same interest in health, the same daily opportunities of assisting the Doctors' patients and straightening out the problems of telephone-answering and many of the increasing demands that have come with the various changes of the past few years. And most of us, whether we be wives or grand-mothers, aunts or daughters, have the same problems of home, children and daily routine; and sometimes wonder how others, meet these problems.

It has been suggested that a Child Health and Welfare page, where we may exchange views, giving each other the benefit of one's own experiences—might prove helpful.

Such topics as Education, Health, Recreation, and Home Activities could be discussed or outlines for study groups such as:

Problems with the pre-school child; problems with the kindergarten child; problems with the grades; problems with the high school child; problems with the college student.

How would you like it? Having thought along these lines for many years as teacher, wife, mother and club woman, I would be glad to hear from you and exchange ideas and experiences.

This may come to the eyes of some who once belonged to a Medical Students Wives Club in Louisville. Will you not be among the first to let me hear from you?

Yours for the health and welfare of our children.

(Mrs. P. F.) Elizabeth Akin Barbour.

## A POEM FOR MOTHERS

"I took a piece of plastic clay
And idly fashioned it one day,
And as my fingers pressed it still,
It moved and yielded to my will.
I came again when days were past,
The bit of clay was hard at last,
The form I gave it still it bore,
But I could change that form no more.

I took a piece of living clay,
And gently formed it day by day,
And moulded with my power and art
A young child's soft and yielding heart.
I came again when days were gone;
It was a man I looked upon;
That early impress still he bore
And I could change it never more."

(Author unknown)

## FATHERS

Most people will agree that the ideal guardianship of children is that which is shared equally by both parents. But, how often we see the whole responsibility of care, with its attendant problems of development, training and management from birth to maturity, left entirely in the hands of the mothers, nurses and teachers. Because of this usual procedure, it is generally conceded that women, particularly the mothers, are the keepers of the race. There are frequent notable exceptions, however to reassure us that present-day fathers are thinking and doing what they deem best for their sons and daughters. As an example, we quote from Time, the February 26, 1934 issue:

**"Surgeons and Fathers**

In addition to being the most famed U. S. surgeons, Brothers William James Mayo, 72, and Charles Horace Mayo, 68, are also fathers of some renown. Brother William has two daughters; Brother Charles has two sons, six daughters. When last week the Mayos placed a fresh $500,000 beside the $1,500,000 with which in 1915 they established University of Minnesota's Mayo Foundation for Medical Education and Research at Rochester, they accompanied their gift by a statement in both capacities.

Wrote they: "Since our money came from the sick, we believe it ought to return to the sick in the form of advanced medical education . . . .

"It seemed to us, then (in 1894) as now, that monies which should accumulate over the amount necessary for a living, under circumstances which would give favorable conditions to work and prepare reasonably for our families, would interfere seriously with the object we had in view.

"How many families have we seen ruined by money which has taken away from the younger members the desire to labor and achieve and has introduced elements into their lives whereby, instead of becoming useul sitizens, they have become wasteful and sometimes profligate."

## A FRIEND OF CHILDREN

**Gentleman—Surgeon—Soldier—Cook**

**Mrs. A. T. McCormack**

Dedicated May 15, 1916 to the relief of pain and suffering in unfortunate little children and in memory of their beloved friend, Dr. Ap Morgan Vance (May 24, 1851—December 9, 1915), is a beautiful and useful memorial at the Children's Free Hospital, Louisville. It is the surgical ward of this institution, founded in 1890 by Miss Mary Lafon with the assistance of Dr. Vance and others. In grateful appreciation of

the valuable and unselfish services of Dr. Vance to the Hospital, the Board of Managers, at their regular meeting on January 25, 1916, officially named the surgical ward, where he had done outstanding work, The Ap Morgan Vance Ward. The Board also voted, following the effective action of the Louisville Evening Post, upon suggestion by Colonel Andrew Cowan of raising a Vance Memorial Endowment Fund for the Hospital, to place on the west wall of this ward, a commemorative tablet bearing the names of each of the donors listed beneath a picture of Dr. Vance. As definite, tangible evidence of their appreciation for his kindly ministrations and constructive service to ailing unfortunate childhood, 126 individuals and 7 local organizations in Louisville contributed $7,557.00, in sums varying from 44c to $132.00, as the Vance Memorial Endowment Fund for the Children's Free Hospital.

Although noted for his remarkable success in general surgery, Dr. Vance devoted his practice largely to orthopedic surgery. Club feet, crooked backs and other crippling deformities, as well as the keen, penetrating pain of appendicitis, yielded to his magic touch. Children (he had 8 of his own) were always his special interest, particularly the unfortunate ones, and they loved him in return with sincerity, with enthusiasm.

Born in Tennessee, educated in the public schools of New Albany, Indiana, Dr. Vance studied medicine under Dr. David W. Yandell then at the University of Louisville and, following graduation in 1878, served his internship in the New York Hospital for the Ruptured and Crippled.

In 1881, he began the practice of medicine in Louisville and was the first member of the profession to confine his work to surgery. He was elected President of the Kentucky State Medical Association at the Annual Meeting in 1915, just a few months before his death. Aside from the practice of medicine, Dr. Vance was actively interested in public affairs. He was a member of the Board of Commissioners which built, within its budget of $1,000,000.00, the present City Hospital in Louisville, opened for service in 1912. To get the best results for Louisville, Dr. Vance had spent weeks of his time investigating and inspecting like institutions in other cities. For many years he was a member of the Surgical Staff of the City Hospital. For 31 years, he gave his services, freely, at all hours, to the hundreds of residents of the Masonic Widows and Orphans Home, his only reward being the love and gratitude of these women and children whom he served so loyally. Yet, he was not a member of the Masonic Order.

As a member of the Old Louisville Legion, Dr. Vance saw active service in the militia during the feuds in the Kentucky mountains. From a symposium of tributes to his memory, we quote from General John B. Castleman:

"38 years ago Dr. Vance was a member of the Louisville Legion. Then came the first use of police power of the State to suppress, among a good people, hostile feuds compelled by isolation, by unwise sub-division of political units and by non-enforcement of law. A detail of 60 men was ordered to Breathitt County. It was then the "Jerry-Little Feud." The detail was of volunteers for a hard winter's campaign. Vance, a young medical practitioner, was of the detail. The Governor, having limited knowledge of the care of men, objected to my employing experienced cooks to preserve the health of the boys accustomed to good food. Vance reported to me that he had been taught to cook and hoped he might relieve my apprehensions; and that if the commanding officer would detail 3 of the boys to help him I might rest assured that he would prepare for the 60 soldiers good, wholesome food. The result was satisfactory."

"En route from Mt. Sterling to Jackson, the march was about 70 miles, and, as I recall the physical conditions, the meanderings of Troublesome Creek frequently crossed the Jackson road—with shallow water. Among the soldiers were two delicate young fellows, Charles Churchill—dying afterwards as an officer of the United States army—and Henry Smith, who died a few years ago, well-known and respected as a Louisville citizen. Vance was the acting medical officer and, caring for these delicate comrades, would repeatedly carry one under each arm across the creek. At Jackson, Vance habitually reported at night to the officer of the guard and obtained leave to take the watch of a comrade whom he wished should not be exposed to the night's cold. While cook, Vance was made surgeon with the rank of Major, but he continued his duties as cook till the end of the winter's campaign. Captain Buck, with a picked detail of six men, arrested Jerry Little and his immediate retainers. In that picked detail, were Ap Morgan Vance and—"

Commenting on the foregoing and commending Dr. Vance for this essential service to the health and welfare of the men, a friend writes: "His kitchen labors in Breathitt did not prevent him from discharging his military duties. His title of Major did not make it impossible for him to continue to cook. 'Vance reported to me that he had been taught to cook.' says General Castleman. Why? And, Where? And, 'The result,' says General Castleman, with soldier brevity, 'was satisfactory.' "

"The campaign of which General Castleman writes took place 38 years ago—in the late '70's. Dr. Vance was a member of a slave-holding family. He grew up during the period of Reconstruction when the slaves were rejoicing in the new-found freedom and many Southern women were, themselves, physically unable to accomplish, without assistance, the tasks of a ser-

vantless house. In that period of stress, the men of Dr. Vance's class came to the defense of the women of their families as gallantly as, a few years before, the clans had rallied to defend the cause in which they believed. It is easy to imagine the circumstances in which the Southern youth learned to make himself useful about the house at a pinch, and the pinch was pretty regularly felt. It is easy, too, to imagine the circumstances in which this same youth is described by the Colonel of his regiment as having waded "Troublesome" with a comrade under each arm because he, as their medical officer, advised against these two frail young fellows getting their feet wet."

Another friend writes: "The Children's Free Hospital was always foremost in Dr. Vance's many fields of labor. Of his innumerable deeds of kindness, his services to the afflicted little ones in this institution were the most beautiful. He brought to bear all his knowledge and all his great skill in his gratuitous work of healing the children."

And, still another friend adds: "When we seek to impress upon our children the value of the manly virtues, of being truthful even to one's own hurt, of being gentle with the humblest and firm with the powerful, of being of good courage and faith, of doing one's duties everywhere and under every circumstance, of living clean, brave, serviceable life, we need not seek for example beyond Ap Morgan Vance."

## BOOK REVIEWS

### The Great Doctors

**Mrs. E. L. Pirkey, Louisville**

Dr. Henry E. Sigerist, the author of this book, The Great Doctors, is a German physician, formerly of Leipzig but now, Professor of History of Medicine at Johns Hopkins University, Baltimore. In this series of biographies, he writes intimately of the lives and the professional work of The Great Doctors in a first attempt to "humanize" the history of medicine. Dr. Sigerist published the first edition in Germany two years ago. It was such a success that an edition was demanded in the English translation; this, he enlarged with a chapter on Sir William Osler. Perhaps the most noteworthy thing about the growth and development of the art and science of medicine has been the joint efforts, though frequently by diverse methods, for the solution of the same problem by widely separated earnest workers in the several branches of science of many different nations. In the story of medicine throughout the ages, strange and notable figures are brought before us: simple, sincere practitioners, mere adventurers, eminent geniuses, and, most of all, students of natural sciences. All types of scientists have furthered medicine.

Dr. Sigerist presents before us an array of African, Asian, European and American Great Doctors. One from Africa and one from Europe are worthy of brief mention in this short review. In Egypt, thousands of years ago lived Imhotep, Minister of State, and a master of the ancient medical arts. Tradition made him a demigod. Also, in ancient Greek legends there was Aesculapius, a sort of human deity. As we emerge from the myth to the opening of the history of medicine in the Fourth and Fifth Centuries, B. C., we are introduced to real physicians and their work. Hippocrates was their "star." Then, as we travel down the centuries, we learn of dozens of Great Doctors who did their part in forging new weapons for the fight against disease. We note William Harvey, who discovered the circulation of the blood; John Hunter, the anatomist; Louis Pasteur, not a physician but a chemist, whose work was so great the Author has given him a place of honor in his book; Robert Koch, Emil Behring, Paul Ehrlich and William Osler—all of whom were great in their own particular line of work.

During these later years of medical advancement in Europe and the United States, Kentucky added her contribution through Dr. Ephraim McDowell of the then backwoods town of Danville, when, in 1809, he had the courage and the skill to remove an ovarian tumor. The operation was a success. It was the first of its kind in the world.

We, today, cannot visualize what will take place in the future but we do know that something greater than even these past experiences will come from continued effort and that the advancement of medicine, the work of the truly Great Doctors no matter where they labor, will always form a great and important part of the world's progress. Dr. Sigerist brings home to us the fact that medical science, like all science, literature and the fine arts, changes in accordance with the surrounding conditions of civilization.

Published in Germany, 1931. English translation by Eden and Cedar Paul. Published by W. W. Norton & Co., New York, 1933. 401 pages. For sale at Wilderness Road Book Shop, Louisville. $4.00.

## RADIO WAVES

**Mrs. John L. Jones, Louisville, State Chairman**

In the October issue of the Woman's Auxiliary Section of the Kentucky Medical Journal, a plea was made for Radio sets to be contributed to the Extension Service, Kentucky University, to be placed by them in a "Listening Center" of some isolated section of Eastern Kentucky.

Mrs. J. I. Greenwell, our President-Elect, of New Haven, Kentucky, very generously gave a Mohawk Radio, which she had in her home. We sincerely thank her.

The Radio Listening Centers make Educational Programs available to many under-priv-

ileged people and they are brought in closer touch with the outside world.

E. A. Weir, Director of Programs, Canadian Radio Broadcasting Commission, says, "To me the prime purpose of this great medium of thought-communication is to assist in development, to the highest degree, the latent possibilities of the talent lying undeveloped or semi-developed in our cosmopolitan population. It is not merely a question of whether we shall increase the turn-over of our industries and add so many millions to our trade balance, but whether the inherent genius of the scattered population that we are trying to mould into one united people shall have the opportunity to express itself."

## MISSOURI'S ESSAY CONTEST

The Missouri Auxiliary has always taken an active interest in public health projects and this year, again, sponsors an eassay contest under the chairmanship of Mrs. W. H. Goodson of Liberty, who writes in describing the contest:

"The State Board selected the subject and at once I asked each County President to appoint an Essay Chairman and to have the County Auxiliaries conduct the County Essay Contests and offer their own prizes. The winning essays from each County, that is, the best essay from the Junior High Schools and also the best essays from the Senior High Schools, are entered in the State Essay Contest. The State Prizes are Ten Dollars and Five Dollars for Senior High Schools; and the same for Junior High Schools. The local prizes differ from One Dollar to Ten Dollars, each. My own County Auxiliary is small so the prizes total only Ten Dollars."

"We advertised the contest in the local papers, by posters and by talking to the school authorities. The Petrolagar Company sends, on request, a colored copy of "The Doctor." I used this for my poster."

Regarding the wealth of reference material available to choose from, Mrs. Goodson writes: "I selected three very simple pamphlets and they are listed on the Rules For the Contest. To them, I would like to add—The Radio Talks obtainable from the United States Public Health Service at Washington; and, the material sent out by The American Public Health Association, 450 Seventh Avenue, New York City. Of course, there are numerous books on the subject of public health but they are expensive and the articles in medical journals are not available to most students."

"Our State goals are:

500 completed essays

An Essay Contest sponsored by each County Auxiliary

A program on this subject in each County Auxiliary."

### Second Annual Essay Contest

Sponsored by the Woman's Auxiliary of the Missouri State Medical Association

The Public Health Service of the United States employs over 5 thousand men and women and spends 11 million dollars a year in fighting epidemics and diseases and trying to prevent them.* So important to every man and woman is the Public Health Department that the Woman's Auxiliary has chosen its work as the subject for its annual essay contest.

Subject: What the National, State and Local Governments Are Doing For Health.

Contestants:

(a) Pupils in the Senior High Schools

(b) Pupils in the Junior High Schools .

Length of Essays:

(a) Senior High Schools, 1,500 to 2,000 words.

(b) Junior High Schools, 750 to 1,000 words.

Prizes:

Each County or City Auxiliary will give the prizes for its own contests.

The State Auxiliary will also award the following prizes:

Senior High Schools—First prize 10, second prize $5.

Junior High Schools—First prize $10, second prize $5.

Time:

The contest will open October 15, 1933, and close April 1, 1934.

Local contests should close, not later than, March 20th.

Local Auxiliaries should make their own rules about typing essays, signing them, etc.

Reference Material:

(a) "The Work of the United States Public Health Service." (Reprint No. 1447) price 5 cents.

(b) "Some Special Features of the Work of the Public Health Service." (Reprint No. 1138) price 10 cents.

(c) "The United States Public Health Service—What Does it do for Me?" Price 5 cents.

The above pamphlets may be obtained from Superintendent of Documents, Government Printing Office, Washington, D. C.

For additional material write to the Public Health Service, Washington, D. C.

(d) Services rendered by the State Board of Health of Missouri.

This excellent outline may be obtained by

*(Most of this personnel and appropriation are devoted to the work of the Marine Hospitals. The appropriation for Rural Sanitation, the classification which covers the work generally understood as "real public health" and which could benefit the majority of our citizens, was woefuully cut for the Fiscal Year, 1933-1934, being but the paltry sum of $25,000.00. Included in the 48 States are about 3,000 Counties! Ed. Note.)

(Continued on Page 56)

# Tuberculosis

Mrs. Lucius E. Smith, Louisville, State Chairman.

## THE CHAIRMAN'S MESSAGE

April of each year is set apart by the National, State and local Tuberculosis Associations for special attention to Tuberculosis.

This does not mean Tuberculosis is to be neglected during the other months, but in April we try to concentrate, in some definite way, upon this important disease. Of course the work is carried on throughout the year, but it is helpful in the springtime to wage an intensive campaign, with a view to focusing public attention upon the most effective methods of controlling Tuberculosis.

We recognize that our health agencies are rendering valuable service, by promoting health and preventing diseases that weaken the body. We also realize that public health work in Kentucky has suffered severely because of insufficient funds and consequent depleted personnel; therefore, this year we are calling this our "Health Recovery Campaign." We are urging all good women to lend heads, hearts and hands to the great task of restoring our health machinery to its rightful place in every community in Kentucky, that it may function with maximum efficiency in health promotion and disease prevention. In this way, we can best fight Tuberculosis.

The importance of finding Tuberculosis early is recognized by all well informed persons today. In the early stages, not only is complete cure possible, but the patient has not yet become a spreader of germs and, so, a menace to others.

The intelligent application of the tuberculin test and the X-ray will detect Tuberculosis before serious damage has been done. This not only makes cure probable, but often leads to the source of infection; thus making it possible to separate the susceptible persons from the foci of infection.

Education is essential. The more we study Tuberculosis, the more we realize the importance of education in its control. Helpful literature may be had for the asking from the Kentucky Tuberculosis Association, Louisville.

"The Journal of the Outdoor Life," published by the National Tuberculosis Association, is a very interesting and helpful publication for all ages. It comes monthly and may be had for $1.00 per year. Every tuberculous person should have it and no students' reading room should be without it.

## VOICES FROM THE FIELDS

CALLOWAY COUNTY—Mrs. J. A. Outland and committee supported the Seal sale in a splendid way. The gross sale was considerably increased over the previous year.

GRAVES COUNTY—Mrs. W. J. Sheltman and committee did excellent work in the Graves County Seal sale. The sale was greatly increased over that of the previous year. We are sure they will be just as energetic in the "Health Recovery Campaign."

JEFFERSON COUNTY—Mrs. R. T. Hudson is gathering material for a comprehensive report of Tuberculosis work in Jefferson County. We hope other chairmen will do like-wise.

MARSHALL COUNTY—Mrs. S. L. Henson helped increase the Seal sale over the previous year. The same energy will be directed toward the April Campaign.

NELSON COUNTY—Mrs. Laura B. Summers and committee made a substantial increase in the Seal sale. She is planning a definite campaign for distribution of literature in April.

PERRY COUNTY—Mrs. R. L. Goad has not been able to get a report in, but we have evidence of the extensive activities and deep interest of Perry County Auxiliary. These earnest people have been responsible for the inauguration of some very important measures for Tuberculosis control throughout the State.

## T B—LETS

Seek medical advice from physicians. They spend their lives studying diseases and treatments.

Self control is of vital importance in treating Tuberculosis.

Knowledge of Tuberculosis should take away fear of it, but increase interest in its treatment and control.

Prevention is the watch word in Tuberculosis control. Education is the foundation to build upon.

Too long continued rest merely means some waste of time, but too early and too violent exercise may destroy every chance of a favorable outcome.

In all cases the family should take it for granted that the physician knows best and be perfectly willing to be guided by his advice and should encourage the patient to do likewise.

The control of Tuberculosis, as in other communicable diseases, involves three factors; cause, carrier, and victim. Break this circle at any point and the disease is controlled.

Tuberculosis robs you—public health protects you.

(Continued on Page 56)

## FEDERAL FOOD AND DRUG BILLS*

**Sarah Vance Dugan, Director**
Bureau of Foods and Hotels, State Board of Health of Kentucky

The interest of every consumer in America should be centered on the action of Congress on the revision of Food and Drug Legislation in the United States.

The present Federal Food and Drugs Act has long been known to have many defects which have prevented adequate protection of the consumer from falsely labeled or advertised and dangerous foods, drugs, cosmetics or mechanical appliances designed to correct or assist the functions of the human body.

Any changes made in food and drug legislation, or any new laws enacted will fail in consumer protection, if, in addition to all protective provisions of the present law, they do not provide;

(1) Inclusion of devices and appliances in the scope of the law.

(2) Inclusion of cosmetics.

(3) Definition of adulteration of food products to include dangerous materials, poisons or other deleterious substances, and contamination with filth.

(4) Definition of misbranding to include false, fraudulent or misleading labeling.

(5) Labeling of food products not defined to include a list of each ingredient.

(6) Ample means for the promulgation of legal definitions and standards of food products.

(7) Labeling of drugs containing narcotic, hypnotic or other habit forming drugs.

(8) Labeling of drugs to indicate the kind, quantity or proportion of each medicinal ingredient.

(9) Control of labeling of bactericides, disinfectants and antiseptics.

(10) Prevention of false or misleading advertisement of drugs, foods or cosmetics.

(11) Protection of public health by prevention of sale or advertisements of drugs, purporting to be treatment for certain definite diseases known to be incurable or not amenable to self treatment without danger to other persons.

(12) Prevention of sale of dangerous foods, drugs and cosmetics.

S. 1944 covered adequately all of these necessary provisions of consumer protection.

S. 2000 covers all of these provisions except (8). No requirement is made to label undefined drug products with a list and proportion of medicinal ingredients, and the general wording of the act has been so changed as to take all power from the Secretary of Agriculture and placed it in the hands of two committees appointed by the President.

S. 2800, introduced by Senator Copeland on February 6th, covers all the requirements for protection of the consumer except that proportions or drugs are not required in labeling of undefined drug products. Under Section 8, Misbranded Drugs, Paragraph (i), a definite method of testing bactericides, germicides, disinfectants or antiseptics is prescribed. This in no way weakens the application of the law, but seems unnecessary. The two committees (Public Health and Food Standards) as provided under Section 22, are appointed in a slightly different manner than in S. 2000. Minimum standards only for foods are provided under the regulations. Consumer protection is still maintained. Carriers subject to the Interstate Commerce Act, publishers, advertising agencies, radio broadcast licenses and retailers are exempted from penalties of law except for refusing to give information.

The two bills, S. 2355 and H. R. 6376, are bills sponsored by the drug trade interests and the consumer is the last individual given consideration.

Congress is urged to pass a food, drug and cosmetic bill in such form as will give protection to the public. S. 1944, S. 2000 and S. 2800 are so designed.

*February 24, 1934.

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## PROCEEDINGS OF THE ELEVENTH ANNUAL MEETING OF THE WOMAN'S AUXILIARY TO THE KENTUCKY STATE MEDICAL ASSOCIATION, HELD AT MURRAY, KENTUCKY, SEPTEMBER 11-14, 1933

(Continued from the January Issue)

### Response to Addresses of Welcome

**Mrs. C. A. Menefee, Covington.**

Friends, and Fellow Auxiliary members: I appreciate fully the honor and the privilege that is mine in replying to these wonderful addresses of welcome and I only wish that I possessed just a little of the gift of oratory which is popularly supposed to be the birthright of every Kentuckian, so that I might make the eloquent response they so richly merit. Lacking this gift I can only say that on behalf of the Woman's Auxiliary to the Kentucky State Medical Association, I wish to thank Mrs. W. H. Mason, Mrs. E. B. Houston and Miss Jincy Hunt, for this royal welcome to Murray, to Calloway County and to Western Kentucky.

Most of us being Kentuckians, either by birth or adoption, love every nook and cranny of the dear old State and feel very much at home anywhere within her boundary: and with this feeling of affection strengthened by these kindly words of welcome, I'm sure we're going to feel at home and enjoy Murray and each other.

You know there is an old saying that "Home is where the heart is," and since a large part of the heart of each one present is in the work of the Auxiliary, we have a good foundation for

that home-like feeling which adds so much to the success of our meetings. These kindly words of welcome add the final touch.

It is good to get away, for a few days, from our busy lives—to relax, and to gain inspiration from the contact with each other in these meetings. It is said that Americans are the busiest people in the world, and I sometimes think that doctors' wives, as a class, are the busiest of Americans. Just recently, I had the pleasure of listening to a lecture by a native of Ceylon—a brilliant young man who is in our country, studying journalism. Among other things he gave a few sly digs at our habit of hurrying through life. He said, "You have beautiful buildings, much more beautiful than in my country, but none of you ever take the time to really **look** at them." The day he landed in New York he was standing, lost in admiration of the beautiful architecture of a large Terminal. A redcap pushed him rudely aside and said "Well, step on it!" Thoroughly mystified he said "Step on what?" The redcap repeated, "step on it!" And again he inquired "On what?" He says he really doesn't know yet just what it is we're all trying to step on, but it seems to him to be just a dominant American trait to "Step on it!" no matter what "it" is.

One of the major joys of this meeting is going to be that of getting away, for a few days, from the necessity of "stepping on it."

Another pleasant thing is going to be the town of Murray itself. It always seems to me that there is an atmosphere of culture, peace and quiet in the smaller college towns, to be found nowhere else; and often in driving through one of them I amuse myself by picking out a cozy looking little house on a quiet, restful street where I'd like to "move in" and "end my days." I think such a home in Murray would be ideal if it were only near Mrs. Houston, Mrs. Mason and Miss Hunt, as I'm sure any group of women who know so well how to make folks feel at home, would make excellent neighbors.

We have found the true spirit of Kentucky hospitality all over western Kentucky.

We have just spent ten days at Reelfoot Lake, and with one exception we have been accorded more consideration and courtesy from every living thing than we can ever remember to have experienced. This one exception was the fish in Reelfoot Lake. We fed them every delectable tidbit we could think of, or that any one suggested, but they just swam past our boat, and turned a glassy eye in our direction—we even fancied some of them stuck out their tongues at us in passing. However, we haven't given up all hope of these fish—we plan to come back some day and try to feed them something they really like.

Anyway, as long as the people of Western Kentucky are for us we're going to forget the fish and enjoy Murray and our Auxiliary friends.

So, let's drop every worry
While we tarry in Murray
Along with this medical throng
While we lend all our powers
To these doctors of ours
To help their great work along.

"Our reward," do you ask?
A well-finished task
Is reward enough of its own:
But the work we do here
Will grow all through the year
And we'll reap every seed we have sown.

To Kentucky's far west
Let us give of our best
So they'll ask us to come back, some day.
And we'll come, in a hurry
To this pleasant old Murray
If only they'll tell us we may.

## REPORT OF SECOND VICE-PRESIDENT

In November 1932 Mrs. B. K. Menefee asked me to try to interest each Medical Society within the Third District in the organization of an Auxiliary in its county.

The above mentioned district consists of twenty-nine counties. I have written to the Secretaries of every one of these County Medical Societies, and one other, but have only received four answers. Three appeared quite interested and very hopeful of organizing in the near future. The other, because of so few doctors in the county and with illness in some of their families, thought it impossible to organize at present, but was thoroughly in sympathy with the work and hoped to get started sometime in the near future.

(Mrs. Luther) Linnie M. Bach.

## REPORT OF THE TREASURER

I submit herewith the Auditor's report of receipts and disbursements of the Woman's Auxiliary to the Kentucky State Medical Association, which shows

| | |
|---|---|
| Total Receipts | $232.64 |
| Total Disbursements | 119.02 |
| Balance in bank | $113.62 |

I also submit a Supplementary Report showing receipts and disbursements since the Audit July 20, 1933 to September 8, 1933, which shows

| | | |
|---|---|---|
| Total Receipts | $ 15.10 | |
| Total Disbursements | $38.62 | |
| Balance in bank July 20, 1933 | $113.62 | |
| Receipts since July 20, 1933 | 15.10 | $128.72 |
| Disbursements since July 20, 1933 | | 38.62 |
| Balance in bank Sept. 8, 1933 | | $ 90.10 |

The Auditor's report of receipts and disbursements of the Jane Todd Crawford Memorial Fund is also submitted. There have been no receipts nor disbursements since this Audit.

Respectfully submitted,
Mrs. (Curt H.) Edna R. Krieger.

(See October, 1933 Issue, pages 10-13 for detail)

## REPORT OF ARCHIVES COMMITTEE

Early in May, 1933 I prepared and sent to the National Chairman of Archives, Mrs. Appleman, a scrap book containing 35 pages. This was exhibited at the American Medical meeting in Milwaukee in June and then returned to me.

I am indebted to Mrs. A. T. McCormack for the greater part of the material in this book, which also contained reports of some activities of the Perry County and Campbell-Kenton County Auxiliaries.

To our own state scrapbook I added 28 pages, most of these being clippings concerning the State meeting and reports of activities of Jefferson, Perry and Campbell-Kenton Counties.

In securing these clippings and data I wrote fifteen letters to the various Auxiliaries from most of which I received no reply.

Respectfully submitted,
(Mrs. C. A.) Hattie H. Menefee,
Chairman.

## REPORT OF PARLIAMENTARIAN

For the amendment of Article 9 in our Constitution, the following proposed revisions were "sent to each County Auxiliary, not less than two months prior to" this regular meeting. Copy was also sent to each State Officer and each State Committee Chairman.

**Proposed Revisions in the Constitution**

July 1, 1933.

The following proposed revisions in the Constitution of the Woman's Auxiliary to the Kentucky State Medical Association, are submitted for your consideration, to be acted upon at the Annual Meeting, September 11-14, 1933, Murray State Teachers' College, Murray, Ky., to-wit:

Article 9—Dues, reads:

"Each County Auxiliary shall pay anually dues to the State Auxiliary at the rate of fifty cents per capita; this to include the dues of twenty-five cents per capita to the Woman's Auxiliary, American Medical Association, and the dues, of one dollar per county organization, to the Woman's Auxiliary, Southern Medical Association. The dues, payable January 1st, should be sent to the State Treasurer."

To designate to whom the State Treasurer pays dues annually, strike out the second last word, "State," and insert "National Auxiliary." Add "and to the Southern Auxiliary Treasurer." Add Section:

B. Members of the State-At-Large shall pay their dues at the Annual Meeting or send them to the State Treasurer at that time.

Add Section:

C. A newly formed County Auxiliary shall pay an initiation fee of $2.00 in order to obtain representation at its first State Meeting. Thereafter, it shall pay its full membership dues, at the rate of fifty cents per member, to the State Treasurer at the end of the County Fiscal Year, as herein before provided.

Revised, this article reads as follows:

Article 9—Dues.

A. Each County Auxiliary shall pay annually dues to the State Auxiliary at the rate of fifty cents per capita; this to include the dues of twenty-five cents per capita to the Woman's Auxiliary, American Medical Association, and the dues of one dollar per county organization, to the Woman's Auxiliary, Southern Medical Association. The dues, payable January 1st, should be sent to the National Auxiliary Treasurer and to the Southern Auxiliary Treasurer, by the State Treasurer.

B. Members of the State-At-Large shall pay their dues at the Annual Meeting or send them to the State Treasurer at that time.

C. A newly formed County Auxiliary shall pay an initation fee of $2.00 in order to obtain representation at its first State Meeting. Thereafter, it shall pay its full membership dues at the rate of fifty cents per member to the State Treasurer at the end of the County Fiscal Year, as herein before provided.

These revisions to Article 9 were approved by the Executive Board, September 11th and adopted by this body, earlier today, (September 13, 1934).

Respectfully submitted,
(Mrs. V. A.) May C. Stilley, Parliamentarian.

## REPORT OF THE MILWAUKEE MEETING OF THE WOMAN'S AUXILIARY TO THE AMERICAN MEDICAL ASSOCIATION

**Mrs. B. K. Menefee, Covington, Delegate**

The Auditor reported the books in excellent condition.

Action taken by the Board on the Jane Todd Crawford Project was reported. The President read the names of the Committee she had appointed—Mrs. J. A. McCaw, Colorado; Mrs. J. Bonar White, Georgia; Mrs. Fielding Lewis, Pennsylvania—to investigate the suggestions of the several states and report at the next annual meeting.

Mrs. Horace Whitacre, Chairman of Organization, made a splendid report. The loss in membership has been great, amounting to 1550. This was balanced by 1551 new members. Membership at present of 13,688. She found it difficult to secure information and urged that the states be more prompt in sending reports; would like a report from each state treasurer as to the number of members who have paid dues.

Mrs. Arthur B. McGlothlan, Chairman of

Program, would this year have all use the slogan "Know Your Auxiliary." Recommends that the Auxiliaries use literature that has been approved by the American Medical Association. Find your state problems and help to solve them. Remember that you have an Advisory Board and seek help from them. Read your Journal. Study the Hand Book. Then, you are in a better position to make out a program for the year.

Mrs. William Weston, Chairman of Legislation, advised we plan our State Auxiliary laws to conform as far as possible to the National Auxiliary. Eligibility to membership in Auxiliary is to be decided by each state. Past Presidents may hold any office in state work. Consult Hand Book for many points on law.

Mrs. A. Haines Lippincott, Chairman of Public Relations, made an extensive and interesting report, a copy of which is on display in our exhibits. In part she said, "Every State Auxiliary should have an active Public Relation Chairman. She should be well informed regarding the program of her own State Board of Health, pass on information to local auxiliary members, so they may take part in local organization; whenever possible to use the study envelopes. She advises each County Auxiliary to have one meeting during the year and invite Officers and Boards of all local Organizations of Women, entertaining and instructing them along the lines of the aims of the medical profession in the advertisement of Health Education. Make this a high spot in your year's program, a meeting of such pleasure and value that every woman in your county will consider it a privilege to attend."

Mrs. Roger N. Herbert, Chairman of Hygeia, urged the use of Hygeia, the health magazine, calling attention of members to the liberal terms that are given to Auxiliaries who take subscriptions and how quite a bit of money may be made for the Organization.

Mrs. Spencer Allen Collom, Chairman of Revisions, presented copies of the Revisions to the Constitution and By-Laws, a copy of which will be found in the exhibit.

Mrs. Milton P. Overholser, Chairman of Press and Publicity, was absent. The President praised her for the work she is doing, especially the News Letter she sends out.

Mrs. James F. Percy, Chairman A. M. A. Bulletin, urged that good use be made of this bulletin. Thinks it will be found very helpful.

Mrs. William Burrell Odenatt, Chairman of Archives, reports the accumulation has been rapid and a cabinet is necessary to take care of the collection. A fund of $35.00 was set aside to buy a cabinet.

Mrs. Arthur H. Brumback of Chicago extended an invitation to those visiting the Century of Progress Exposition at Chicago to visit Cook County Medical Society Booth K in the Hall of Science and rest and register. Thanks for this privilege is due to Dr. Eben H. Cary of Milwaukee and the Cook County Medical Society.

1:00 P. M. Luncheon and Bridge at the Wisconsin Club. For those not caring to play bridge, many attractions were available, one of which was a trip to the Milwaukee Children's Convalescent Home. This home and its furnishings were given to the city by the Smith family, who manufacture automobile parts and other articles of steel. Here amid home-like surroundings many little crippled children are cared for and educated. It has a capacity of 50 beds and is supported by the city.

8:00 P. M. The opening meeting of the American Medical Association was held in Plankinton Auditorium, following at 10:00 P. M. with an informal dance at the Wisconsin Club by the County and the Wisconsin State Medical Society.

Wednesday, June 14, 9:00 A. M. General Meeting and election of officers was held in the Roof Room Hotel Phister.

Minutes of previous meeting read and approved.

Reports of States were called for and 33 states reported. Many valuable points were brought out. Among them, we noticed the following activities:

Mrs. Red of Texas, our first National President, reported that to date the sale of her book "The Medicine Man of Texas" had yielded her the sum of $800.00, and she is using this as a student loan fund.

Other reports featured activity in Physicians' Benevolent Fund, Aid to Widows of Physicians, Student Loan Fund, Library Fund, supplying beds in Tuberculosis Hospital, emergency outfits for Doctors use in obstetrical cases in homes lacking proper facilities, supplying milk to undernourished and crippled children.

Work is done through Parent-Teacher Associations, Lectures to Lay Groups, Health Day Celebration, inviting all women's clubs as guests, members having periodic health examinations and teaching others to do so, providing health pictures, preparing posters for use in schools, stores, markets, etc., aiding in the study and passing of bills regarding health work in State Legislatures, one of which was making compulsory the use of silver nitrate in the eyes of all new born babies; also helped to retire cult bills, keeping watch on laws pertaining to schools, seeing that unauthorized health books are taken out of schools.

Many copies of Hygeia, the health magazine, were reported placed in schools.

Contests were held in schools on prevention of Tuberculosis and prizes offered to boys and girls competing, papers to be judged by physicians.

Jane Todd Crawford Programs were given in several states.

Kentucky reported the only magazine edited and financed by an Auxiliary, but space is given

in many State Journals for the use of Auxiliary items.

A bound copy of Kentucky's "Quarterly" for 1932 was presented to the National Auxiliary.

Several states report the collection and filing of historical material and are greatly interested therein.

Increase in the use of the Study Envelopes was reported by many states.

These reports lead us to believe that our work in the Auxiliary can be made very helpful to mankind.

Mrs. Rollo K. Packard, Chairman of the Nominating Committee, presented her report and the nominees were elected unanimously.

(See back page for names and addresses.)

Final report of Committee on Registration gave 843 members registered and 266 visitors.

12:30 P. M. National Auxiliary Luncheon was given in The Fern Room of the Hotel Phister with Mrs. James H. Haskell of Wisconsin as Toastmistress. Seated with the officers at the guest table were the following speakers from the American Medical Association.

| | |
|---|---|
| Dr. Edward Cary | Dr. J. H. J. Upham |
| Dr. Dean Lewis | Dr. J. H. Walsh |
| Dr. A. T. Mitchell | Dr. Olin West |
| Dr. Eben J. Cary | Dr. Morris Fishbein |

During the luncheon, wit and humor abounded and every one seemed happy. The tables were quite festive. Each guest was given a jar of Orange Marmalade, a gift of California. These were wrapped in purple and gold celophane and made a beautiful touch of color on the tables.

2:00 P. M. There were four teas given in as many homes. These were well attended and every one who went spent a very pleasant afternoon.

8:00 P. M. A Comic Opera by Gilbert and Sullivan, "The Pirates of Penzance" was given in Madison Theatre, by the International House Opera Company, especially for the American Medical Association Convention.

Tuesday, June 15, 1933. 9:00 A. M. A Post Convention Board Meeting called in the Mirror Room of the Hotel by Mrs. James Blake. After some matters of business were discussed, the general meeting was continued in the Roof Room.

The President said she had no radical changes to make, considers the county or its equivalent the unit of our work and the keynote, service to the physicians in our counties.

A splendid musical program was rendered. Community singing was led by Mrs. William H. Myers of Savannah, Georgia, using "Lyrics of Song" compiled by Mrs. Myers. These Lyrics had been used when Mrs. W. J. Freeman visited in Georgia, and she had requested that they be used at this luncheon and her request was honored.

Suggests we look to Advisory Board to be our helpmate in every way.

Think each State must decide on what will be best for them, but would be ready at all times to council and advise all who ask her for help.

The committees for the year were announced, a list of which is given on the back of our **Quarterly.**

The question box was opened at this time and questions were answered by reference to the Constitution and By-Laws.

12:00 Noon. Buses were in waiting to take those who wished to go to Oconomowoc Lake District, a drive of 30 miles, where we were the guests of the Carnation Milk Company. A delicious luncheon was spread for us on the tables under the trees by the lake. Five hundred guests were seated and served altogether. Music and songs were rendered by the Cow girls in uniform and by a group of boys under supervision of the Carnation Company. We were each given a souvenir and the noise made by these reminded us of milking time down on the farm when calves were waiting to be fed.

After the luncheon, we were conducted through the Plant of this company, where we saw the cans in making, the reception and treatment of milk before canning, cans being filled, sealed, boxed and loaded on cars ready for shipment. After seeing this care and treatment of the milk, we will appreciate Carnation Milk and use it more and more.

6:30 P. M. Bring Your Husband Dinner. Entertainment by the International House Cabaret was given in the Fern Room of the Hotel Phister. This was one of the outstanding social events of the Convention. Six hundred persons were served.

This was followed at 9:30 P. M. by a Reception and Ball to the President of the American Medical Association at the Hotel Schroeder.

Friday, June 16, 1933. 10:00 A. M. The Golf Tournament was held at the Milwaukee Country Club.

The next meeting of the American Medical Association is to be held in Cleveland, Ohio, in 1934.

It was stated that the total attendance was about 7,000.

(Conclusion of report, continued from January Issue)

## Reports from Counties

The Calloway Auxiliary has a small paid up membership, but the doctors' wives, mothers, sisters and daughters of this county feel very kindly toward the program of the Kentucky Auxiliary. With a little more energy put into organization work many more of them should be enlisted. Since our organization we have studied the Kentucky Health Laws and the National Study Courses and have presented health programs publicly.

Our activities for the last several days have been directed toward making your stay at this

State Meeting in Murray a pleasant one. We are happy to be your hostess.

The Jane Todd Crawford project has been presented to other clubs of our county. The women were interested in learning of this Kentucky heroine.

We are preserving the history of our Calloway County physicians.

Most of our doctors' wives are actively engaged in helping to promote health work in our county, either through the Auxiliary or other clubs.

We are glad in this report to express our appreciation of the untiring work of our state President, Mrs. A. T. McCormack. **The Quarterly** edited by Mrs. McCormack is an ever welcome and most helpful publication.

Our president, Mrs. Houston, through this medium, wishes to report that she has answered all mail received from the state and national organizations and has complied with the requests when possible and consistent with circumstances. She has been called to meet with other County Auxiliaries and has responded when at all practicable. She has presented the purposes of the Auxiliary to other clubs. She has introduced Jane Todd Crawford to a number of women during the year. She gave personally a donation to help with the publication of **The Quarterly.** She has served the State this year as Chairman of Public Instruction.

Mrs. C. H. Jones, our secretary, has been diligent in her duties. She wishes to report here that she is using the required membership receipt book.

Respectfully submitted,
(Mrs. J. V.) Mabel G. Stark, Delegate.

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## CAMPBELL-KENTON

The Auxiliary to the Campbell-Kenton Medical Society held nine regular and two special meetings during the past year, most of which were fairly well attended. However, for various reasons we have not been able to enlist as many of our ladies as we had hoped to do.

Our work has failed in many ways to measure up to our plans but we are still hoping that our Auxiliary will take on new life as conditions improve generally.

We have the following committees: Membership, Program, Social, Publicity, Historical, Hygeia, Tuberculosis, Jane Todd Crawford, and Radio. But, as is the way with committees—some have failed to commit, while others have done their work in a beautiful way, for which we are truly thankful.

Some of our members read and appreciate our **Quarterly** while others have not as yet seemed to catch the vision. We tried repeatedly to interest our members in sending donations for its publication, but failed to do so as an organization, so a few of us sent in personal donations of $1.00 each.

Our efforts so far in the matter of radio talks have been unsuccessful. First a letter from the Auxiliary was sent to the Campbell-Kenton Medical Society asking the members to consider radio broadcasting of health talks,—broadcasting to be done by the various doctors with the Auxiliary attending to the detail of arrangements. After much discussion the doctors decided that such would not be expedient at that time.

Then we asked the Advisory Council to consider allowing us to give the talks under our own name as an Auxiliary. So far as I know they are still considering the matter since they have not informed us of any decision they have reached in the matter.

We did not push the matter of funds for the Jane Todd Crawford Memorial. Since there were so many needy folks all around us who needed every penny we had to spare, we felt that the above mentioned fund would have to wait until some future time when the financial depression would not be quite so depressing. But—we have talked a lot about the project.—Education!

The only thing we were able to do in tuberculosis work was for each of us to use as many Christmas seals as possible, thereby helping that good cause along.

In order to inject more interest into our meetings a study class was suggested. Mrs. Bach was asked to prepare the first talk. She responded with a review of the life and work of Dr. Gorgas with special emphasis on his work of wiping out yellow fever and malaria in Havana and the Canal Zone.

Later Mrs. Stewart Biltz read a paper on Preventive Medicine which was most interesting and instructive.

We also decided to do something for the hospital which had been kind enough to furnish us a room in which to meet. So we met and made forty-eight mattress covers, and fifty-seven blankets, and a few bands and presented these to the Maternity Ward of the St. Elizabeth Hospital.

Our other hospital, being no less in need of the same supplies, we decided we could afford to do no less for them, so we took the same amount of money from our treasury, as we had taken for the St. Elizabeth, and purchased more of the same kinds of material from which we made fifty-one blankets, thirty-eight mattress covers and some bands for Speers Memorial Hospital. These gifts were much appreciated by both hospitals.

Our Social Committee put its best foot forward in arranging for our Christmas party which was a delightful affair. The decorations were beautiful but inexpensive, the games and contests were interesting and refreshments were delicious. Each member present brought gifts of groceries and food supplies from which nice baskets were arranged for some poor families in Covington and Newport.

Then again at our annual banquet which was at the Masonic Club in Newport, our Social Committee led by Miss Pauline Haley, lived up to its reputation in the matter of decorations and entertainment.

The banquet table was beautifully decorated with yellow jonquils and orchid sweet peas. The same color scheme being carried out in candles, candle holders, hand-painted place cards and programs, with tiny black medicine bag favors.

After we had enjoyed a very interesting talk by Mrs. Francis Strain, of the Mental Hygiene Department of the Cincinnati Mental Hygiene Society and some readings by Mrs. Hazel Schmidt of Bellevue, we enjoyed talks by our President-Elect, our own Mrs. B. K. Menefee, who like the poor, is always with us. (We can always depend upon her. She is a veritable tower of strength to us), Mrs. Blackerby to whom we owe our existence since it was she who organized us while she was state President, and last but not least was our enthusiastic, conscientious, hard-working President, Mrs. A. T. McCormack, who talked on the "Objectives of the Auxiliary" which gave us new courage, and as usual made us want to do greater things. Then we were favored by a talk from Miss Sheila Johnson, Principal of the Samuel Woodfill School in Ft. Thomas, on the "Health Work in the School."

Every one went home feeling that this was by far the best meeting of the year because we had enjoyed so many good things all in one evening. There exists between our membership a friendliness and fellowship that is beautiful.

We have twenty-four paid members, and there are others who have promised to join our ranks.

(Mrs. Luther) Linnie M. Bach, Delegate.

## GRAVES

The Woman's Auxiliary to the Graves County Medical Society holds regular quarterly meetings in March, June, September and December. However, several called meetings have been held in between these dates when the ladies could get together. Two meetings were held between June and September. Our distances are great and we could not agree on a fixed date oftener than every quarter. Our last regular meeting was held on September 8th. At this time we expected to elect officers for the ensuing year but as we had so much other imperative business to conduct, there was no time for the election and this was postponed to a Call Meeting scheduled for September 30th.

14 of our members were present at this State Annual meeting, yesterday, and 12 are present today.

(Mrs. J. R.) Kathryn D. Pryor, President.

## JEFFERSON

I am presenting the Annual Report of our former President, Mrs. Wm. E. Fallis, as little activity has developed since June when she vacated that office. Our new program begins this month.

"Another year, and I may say a fuller year—because it has been one of much activity—has ended. A year that every one can look back upon and feel happy and proud because of its accomplishments."

"The courage with which you have lived this year of great depression has been most thrilling and encouraging. While I have felt deeply the responsibilities I have also realized fully at all times your hearty co-operation and willingness to do,—without which, nothing could have been accomplished."

"Every chairman has done her work most nobly."

"The Study Class under the leadership of Mrs. Irvin Abell, who has introduced us to 'The Doctor in Literature,' has been most diverting, interesting, and entertaining as well as educational—each book review being supplemented with Current Events."

I may add that each book reviewed by the members was either written by a doctor, or concerning a doctor.

In March, Mrs. George A. Hendon, one of the past presidents of the State Auxiliary, reviewed "Devils, Drugs, and Doctors" by Dr. Howard W. Haggard, and Mrs. Emmett F. Horine reviewed "The Lame, the Halt and the Blind," also by Dr. Haggard.

At the April meeting, Mrs. William C. White discussed "The Good Shepherd" by Dr. John Rathbone Oliver, and Mrs. Hugh N. Leavell read "Slinky and the Burtons," an original Easter Story, written by Mrs. John Rogers at the request of the Chairman, Mrs. Abell.

In May, Mrs. P. E. Blackerby reviewed "The Life of Noguchi" by Gustave Eckstein and Mrs. B. H. Blake reviewed Dr. Wm. Allen Pusey's "A Doctor of the 1870's and 80's."

"The interest manifested in "The Doctor in Literature" was evidenced by the excellent attendance at all meetings."

"The Sewing Unit, with Mrs. George C. Leachman as Chairman, has done remarkable work—averaging an attendance of 28 and making around 2,000 garments."

The Sewing Unit meets at the homes. These have been reported in **The Quarterly** except the last three. The March meeting was held at the home of Mrs. I. T. Fugate, the April meeting, with Mrs. L. W. Neblett, and in May, Mrs. D. Y. Keith was hostess for the group.

On June 6, Mrs. S. C. McCoy was hostess for the annual picnic of the Sewing Unit, at her country home on the Preston Street road.

"The Hospital and Welfare Committee under Mrs. S. C. McCoy has also done a most commendable piece of work—35 families having been relieved with bedding and clothing and 38 layettes made and given to mothers before they left the

hospital."

"The Membership Committee with Mrs. R. T. Hudson as Chairman, has added some new members to the Auxiliary."

Mrs. W. K. Kannard has made the Publicity Committee speak for itself and we are justly proud.

"The Flower, Telephone, and Luncheon as well as the Music Committees, also are known by their work.

The Historical, The Scrap-Book, and Jane Todd Crawford projects are still alive, which means works."

"The Hygeia chairman, Mrs. J. S. Bumgardner, has done work worth mentioning—having gotten 12 new subscriptions and 6 renewals—bringing in the amount of $17.10 to the Jefferson County Auxiliary treasury."

"The Radio Committee has been discontinued for the time being. Mrs. L. L. Smith, Golf Chairman, is more anxious to play 18 holes than 9; and also to have three or four "foursomes"—rather than one."

"While we have not made many new launches we certainly have not 'gone back'—and we have accomplished our goal, that of 'promoting acquaintanceship' and good fellowship with each other.

Who knows what God shall deem success?
Great wealth and fame and buildings tall,
To which men turn for happiness,
May not suit His design at all.
And it may be
That we shall see
When time and toil on earth are through,
The will to share
Life's common care
Is all God wished from me and you.

"As God said to the children in the wilderness—so He is still saying to us—only in a louder voice, "Go forward." And with the full knowledge of, and implicit faith in you and our future, I know that next year, you will go on to greater and better things."

Respectfully submitted,
(Mrs. J. Duffy) Marie Seelbach Hancock,
President.

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## MARSHALL

Marshall County Auxiliary has had a meeting this year each time the County Medical Society has met. Plans were made for one of the county doctors to speak to the Benton Woman's Club on a health topic each month. When it was not possible for one of our physicians to appear at these meetings a member of the Auxiliary discussed, to the best of her limited ability, such topics as tuberculosis, scarlet fever, sanitation or personal hygiene. The county medical history is being compiled as rapidly as the data can be obtained.

Mrs. S. L. Henson is County Chairman of Tuberculosis. Activities of the Auxiliary have been limited because of the serious illness of one member and of two physicians.

Plans for the coming year are to conform to the programs of National and State Auxiliaries. One aim is the organization of a study class.

(Mrs. L. L.) Nell Eley Washburn, President

## NELSON

We have had a wonderfully good year in Nelson County this year, perhaps not covering all we wish to do, but with a willing and anxious spirit to do our part.

Since organization in October, 1932, three new members have joined our little group, namely: Mrs. A. D. Steely, Mrs. C. B. Elston, (daughter of Dr. J. G. Carpenter) and Mrs. Mary A. Flaherty (now deceased). We have ten active members. Meetings are held regularly each month, with an attractive social hour, notice of which is published in our local paper. Dues are paid in advance. All committee chairmen have been active. Our chairman of Jane Todd Crawford Memorial, Mrs. A. D. Steely, compiled an interesting article published in the Nelson County Standard. We have planned in an early issue, another interesting article on Dr. Walter Brashear, who practiced in Nelson County. We have collected many clippings for our scrap-book. Archives and History have been taken care of. We finished our Study Course in the Medical and Health Laws. This was interesting and helpful. We were represented at the Milwaukee (National) Convention by Mrs. A. D. Steely, also at the Book-lovers Tea at the Jane Todd Crawford Library in Greensburg by Mrs. J. I. Greenwell. We contributed Five Dollars to **"The Quarterly,"** a publication of which we are proud, with its helpful and interesting pages, for which we thank our editorial staff to the fullest. The Auxiliary assisted our county Medical Society with their meetings, and enjoyed attending their lectures and lantern slide programs. Our local physicians are always encouraging our Auxiliary and out of their number we have a very helpful Advisory Board. We had an unusual Tuberculosis seal sale with the help of our efficient State Executive Secretary, Dr. L. E. Smith, and we have made plans for an even better and bigger drive this year. All our club have promised to assist. Also we have consulted and been promised by our County Representatives in the next Legislative session that they will support a bill for a free State Tuberculosis Hospital.

On different occasions at our business luncheons we have had State Officers and members. Among them, our honored President, Mrs. A. T. McCormack, Louisville; Mrs. B. K. Menefee, President-Elect, Covington; Mrs. Paul Guntermann, and Mrs. Geo. M. Peak, Louisville, and Mrs. J. W. Sams, Crestwood. Much cheer and encouragement were given us by these welcome visitors.

Our county is represented at this meeting this year by myself only.

(Mrs. J. I.) Marie Rapier Greenwell, Delegate.

PERRY

The Perry County Medical Auxiliary has met regularly each month. Our membership consists of 26 members, 6 associate members—and 1 Honorary member—Mrs. Mary Breckenridge. We have added 3 new names to our list during the past few months.

Our program committee, composed of Mrs. H. W. Gingles, Mrs. Dana Snyder, and Mrs. J. C. Coldiron, have done excellent work in arranging the programs in booklet form for this year. We also have a music and entertainment committee which arranges the music, etc., for each meeting.

We have the following contributions to report:

Quarterly ..... $10.00
($5.00 paid by Medical Society)
Red Cross ..... 13.50
Christmas Seals ..... 8.00

Our Hygeia subscriptions have fallen down shamefully. Only 5, for this year, against 56 last year.

The one thing that we have tried to do—other than our ordinary activities—was an effort to arouse interest throughout the State in regard to the Tuberculosis situation. At a meeting of the Auxiliary last February, we invited Dr. R. L. Collins to give a talk on Tuberculosis. He gave some alarming facts in regard to the high death rate, and the lack of adequate care for patients suffering from the disease. At the close of his talk—he threw us a challenge to do something about it.

A committee of three was appointed from the Perry County Auxiliary—to confer with a committee of three from the Perry County Medical Society. The result of this conference was:—to send a letter to Dr. A. T. McCormack and Mrs. McCormack asking their counsel and advise as to what steps could be taken. They very graciously answered this request by coming to Hazard—and bringing with them Mrs. Paul A. Turner, Miss Elva Grant, Mrs. Jessie Gorby, Miss Barbara Turner, and Dr. Martin Jensen, a field director of The State Board of Health.

A special meeting was called—and representatives from the Perry County Medical Society, and the Perry County Medical Auxiliary met with the party from Louisville for dinner, at the Yellow Lantern Tea Room. The problems, ways and means were discussed at length:—Mrs. Turner giving some bare facts, acquainting us with the enormity of the task; Dr. McCormack, reviewing the situation, said that relief could be secured only through a wide-spread campaign of public education. Mrs. McCormack then told of the Auxiliary's plan to sponsor an essay contest on Tuberculosis in the schools throughout the State.

This contest was afterward carried out very successfully in our City Schools. In order to stimulate interest, our Auxiliary offered a prize of $5.00 for the high school, and one of $2.00 for the grades. Aside from the prizes, the winners had the pleasure of seeing their essays printed in our local newspapers. Contacts have been made with several organizations. At the Perry County Teachers' meeting, the names and addresses of 56 teachers were secured and sent to Mrs. McCormack asking that she send the proper material for the essay contest, with instructions, to each one. We feel that this is really going to do some good. We realize that to make the 82 beds at Hazelwood Sanatorium free beds, it will have to be done through legislation by the General Assembly of Kentucky.

Some of our members are citizens of Leslie County and others of Knott County. Some live at the different Coal Camps. We enjoy attending the meetings with them,— as it affords us a nice trip out, as well as a hearty reception, and a good time.

We had the extreme pleasure of having Dr. and Mrs. McCormack with us on one of our joint meetings with our doctors,—at the home of Dr. and Mrs. J. K. Stoddard, of Wooten, in Leslie County. We especially look forward to our annual meeting with The Frontier Nursing Service, at Hyden with Mrs. Mary Breckenridge, our Honorary member, as Hostess. Mrs. Breckenridge is the head of this nursing organization—which is known throughout our own country and abroad.

(Mrs. S. B.) Florence Snyder, President.

## REPORT OF REGISTRATION AND CREDENTIALS COMMITTEE

The Woman's Auxiliary to the Kentucky State Medical Association held its eleventh annual meeting in the Library of the Murray State Teachers College on September 11, 12, 13, 1933, with a total registration of 88 (members 63, visitors 25). Twenty-four counties were represented at the meeting by members and visitors, as follows: Ballard, Barren, Breathitt, Butler, Caldwell, Calloway, Campbell, Carlisle, Fayette, Fleming, Fulton, Graves, Hardin, Harlan, Hopkins, Jefferson, Kenton, Laurel, McCracken, McLean, Marion, Marshall, Nelson and Perry.

Below is given the registration by counties:

| | | |
|---|---|---|
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| Miss Beatrice Harper, | Lovelaceville, | Delegate |
| BARREN— | | |
| Miss H. G. Davis, | Glasgow, | Visitor |
| BREATHITT— | | |
| Mrs. O. M. Goodloe, | Jackson, | Member |
| BUTLER— | | |
| Mrs. C. C. Threlkel, | Morgantown, | Member |
| GALLOWAY— | | |
| Mrs. N. M. Atkins | Murray, | Member |
| Mrs. E. R. Blalock, | New Concord, | Member |
| Mrs. W. H. Graves, | Murray, | Member |
| Mrs. W. F. Grubbs, | Hazel, | Member |
| Mrs. Solon Higgins, | Murray, | Member |
| Miss Margaret Higgins | Murray, | Member |
| Mrs. E. B. Houston, | Murray, | Officer and Co. Pres. |
| Mrs. C. H. Jones, | Lynn Grove, | Member |
| Mrs. Ben B. Keys, | Murray, | Member |
| Mrs. Robt. Mason, | Murray, | Member |
| Mrs. Jas. A. Outland, | Murray, | Alternate |
| Mrs. J. V. Stark, | Kirksey, | Delegate |

| | | |
|---|---|---|
| Mrs W. P. Dulaney, | Murray, | Visitor |
| Miss Hilda Dulaney, | Murray, | Visitor |
| Mrs. Hilda Gaugh, | Murray, | Visitor |
| Miss He Keys | Murray, | Visitor |
| Mrs. Joe Lovett, | Murray, | Visitor |
| Mrs. Barber McElrath, | Murray, | Visitor |
| Mrs. Tom Morris, | Murray, | Visitor |
| Mrs. G. B. Scott, | Murray, | Visitor |
| Mrs. Warren Swann, | Murray, | Visitor |
| Mrs. J. H. Thurman, | Murray, | Visitor |
| Mrs. H. T. Waldrip, | Murray, | Visitor |
| Miss Lillian Walters, | Murray, | Visitor |
| Mrs. Clifford Melugin, | Murray, | Visitor |
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| Mrs. W. L. Cash, | Princeton, | Visitor |
| CAMPBELL— | | |
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| CARLISLE— | | |
| Mrs. R. C. Burrow, | Cunningham, | Member |
| FAYETTE— | | |
| Mrs. J. S. Chambers, | Lexington, | Visitor |
| FLEMING— | | |
| Mrs. J. B. O'Bannon, | Flemingsburg, | Member |
| FULTON— | | |
| Mrs. Hugh E. Prather, | Hickman, | Visitor |
| GRAVES— | | |
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| Miss Sunshine Colley, | Farmington, | Member |
| Miss Ruth Colley, | Farmington, | Member |
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| Miss Jincy Hunt, | Mayfield, | Member |
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| Mrs. W. J. Shelton, | Mayfield, | Member |
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| Mrs. G. C. Covington, | Mayfield, | Delegate |
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| HARDIN— | | |
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| Mrs. L. L. Washburn, | Benton, | County President |
| NELSON— | | |
| Mrs. J. I. Greenwell, | New Haven, | Member |
| PERRY— | | |
| Mrs. D. D. Carr, | Hazard, | Member |
| Mrs. Willard Bartlett. | St. Louis, Mo. | Visitor |

Mrs. Ben B. Keys, Chairman,
Registration and Credentials.

## MISSOURI'S ESSAY CONTEST

(Continued from Page 45)

writing to State Health Commissioner, Jefferson City, Mo.

(e) For information concerning what the local governments are doing for health, consult the local health authorities.

If interested in any special phase of the work of the National or State Health Departments, write directly to the departments requesting material on the subjects.

Judges:

The judges of the State Contest shall be Mrs. Hudson Talbott, President Woman's Auxiliary to Missouri State Medical Association, and two others appointed by Mrs. Talbott.

For further information regarding the above contests write to the chairman of the Essay Contest, Mrs. W. H. Goodson, 37 Moss Avenue, Liberty, Mo.

## T B-LETS

(Continued from Page 46)

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President—Mrs. Hunter W. Gingles, Hardburly.
Secretary-Treasurer—Mrs. A. M. Gross, Hazard.

### WOMAN'S AUXILIARY SECTION OF THE KENTUCKY MEDICAL JOURNAL

Editor—Mrs. A. T. McCormack, 1422 Brown Hotel, Louisville.

Business Manager—Mrs. Peter Guntermann, 674 South 40th Street, Louisville.

KENTUCKY MEDICAL JOURNAL, PART II
WOMAN'S AUXILIARY SECTION

519 Tenth Street Bowling Green, Ky.

Vol. III July, 1934 No. 3

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## THE PRESIDENT'S MESSAGE

**Mrs. B. K. Menefee, Covington.**

As you receive this copy of the Journal, we realize that we are addressing the new corps of Officers of the Auxiliaries and, with your various Committees appointed, we hope that plans for the year are well under way.

We, the members of The Woman's Auxiliary to the Kentucky State Medical Association, have been rather slow in realizing the opportunity we have of doing a great work in an educational way in our state. By united effort we can help others to understand that it is not only the care and cure of disease that our Doctors labor for but for the prevention of disease as well and that, by their unselfishness and constant study the Doctors strive to teach their patients how to conserve health and prevent disease. In this, we can be a real help to them in the contacts we make in the different groups in our communities. Your Advisory Councils will be glad to help you at any time to plan your activities. Do ask them.

We feel that interest in our organization is being awakened. There have been several inquiries in regard to forming new Auxiliaries and we hope to report success in the near future.

We have had splendid reports from the Auxiliaries and we are glad to know that, during the past months, there have been those who have been faithful to the work intrusted to them. A great interest has been shown in the study of Tuberculosis and we hope you will carry this into every organization with which you may come in contact, as well as the schools. If we could stress, and teach the laity, the necessity of an early diagnosis in this disease and also of Cancer, as well, and the fact that, in the early stages, both respond to treatment readily, we would be doing a worthwhile work for the benefit of humanity.

The work being done by the Public Relations Committees is splendid. So much can be done to help those less fortunate than ourselves if we are but willing to give the time to visit the Institutions in our Counties and find how we can help. What do you know of conditions and what is being done in your County to relieve the distress and aid the unfortunate ones near you?

The sewing units have been doing a splendid work. Several of our Hospitals have benefitted by their activities in preparing articles of clothing and bedding for the Maternity Wards. These were thankfully received. The need at the different institutions for these articles has been greater than ever this year. We hope you will plan to continue this work and enjoy the sociability of your Auxiliary while thus engaged.

I hope many of you will have the pleasure of attending our own State Meeting at Harlan in October. This will be a wonderful trip. At that time of the year Kentucky, and the mountains, especially, are beautiful beyond description and we know a genuine welcome awaits you in Harlan. So be sure to come and help us to have a good Session.

# -:- EDITORIALS -:-

## DR. THOMAS WALKER

A physician was the first white man to enter Kentucky and here build a habitation. His name was Dr. Thomas Walker. From his comfortable home at Castle Hill in Albemarle County, Virginia, he came with 5 companions on an exploration trip as a forerunner of the possible opening-up of the new country for settlement, and "built an house," a small log cabin chinked with native mud, in Knox County, about 5 miles from what is now Barbourville, the County Seat. Around the cabin, they planted corn and a few peach seeds. In addition to his observations as a Surveyor, Dr. Walker observed all vegetation, carefully seeking medicinal herbs. That was the summer of 1750, following the trip of the previous April over the difficult trail and through the narrow cut in the mountains named Cumberland Gap by Dr. Walker, as detailed by Dr. Walker himself in his Journal.

In commemoration of Dr. Walker and his band of heroic followers, Judge William Ayres, of Pineville in the adjoining County of Bell, initiated a movement in March, 1924, to build a monument on the site of the old cabin where the years had taken their toll and only parts of the chimney remained standing. In 1931, land was purchased by the Barbourville Post of the American Legion from the Faulkner Family, owners for over 100 years, and the citizens of Barbourville, voluntarily, built thereon a reproduction of the "old Kentucky home" of our first physician. On June 20, 1931, the State Park Commission was given a deed to the 12 acres of land in the center of which stands the log cabin. And the first State Park in Kentucky to honor a physician became a reality with fitting ceremonies before an audience of 5000.

An annual celebration, the Mountain Laurel Festival, honoring Dr. Thomas Walker and that hardy band of intrepid pioneers who braved the perils and privations of the then unknown wilderness in what is now the State of Kentucky, was established four years ago, 1930, in Pine Mountain State Park near Pineville, but 36 miles distant from the Dr. Thomas Walker Cabin.

These pioneers lived close to Nature and it is fitting that this annual memorial of their high purpose and courageous achievement should take its theme from Nature and emphasize the beauty of the hills adorned in all their Spring glory of shimmering green foliage and countless blossoms of every color, laurel and rhododendron proudly carrying off the honors as they captivate all beholders with their matchless charm.

Noble in its setting, exquisitely beautiful in its adornment, is Laurel Cove, the scene of the ceremonial, pageantry, music and dancing. This natural amphitheatre is surrounded on three sides by thickly wooded mountains. The stage is constructed of native stone and green-carpeted with luxuriant grass. Behind it, rises, abruptly, a great stone cliff extending to a height of more than 100 feet, providing almost perfect acoustics. The base of this cliff is buried in thickets of laurel and rhododendron while dainty rock-loving ferns and fairy-like flowers of every colorful hue cling to the crevices and deck the shrubbery.

From the stage, the ground slopes gently upward, making it possible for members in the audience on the outermost edges of the clearing to have an uninterrupted view of the ceremonies on the stage. To the right of the stage, a stairway carved from stone, mounts upward to a small cave. From here, the most beautiful young lady, selected from among the students, in Kentucky, Indiana and Tennessee schools, with her attendants, descends to the Court of Honor to be crowned Queen of the Mountain Laurel Festival. And, here, again, is the memory of the valiant deeds of Dr. Thomas Walker and his courageous companions commemorated with fitting ceremony.

## PARTNERSHIP IN SOCIAL WELFARE

Jefferson County Auxiliary was one of the many organizations represented at the Annual Luncheon Meeting of the Family Service Organization, Saturday, April 14th, at the Kentucky Hotel, Louisville, when about 400 guests heard Mr. David Craig Adie, Commissioner of Social Welfare in New York State, urge the continuation and support of private charities. As the speaker presented a plan for the tie-up of public and private agencies he said:"There will be plenty of work for both public and private agencies for the next five years."

"You hear much talk of turning all private charities over to the public. Those persons who advocate public agencies are not socially-minded, but distress-minded. They are afraid of what might happen if certain things don't click in this country. If you are wise, you will maintain your well-organized private agencies. The communities which have neglected private agencies will find themselves devoid of social machinery and severely handicapped when the depression is over. As the depression recedes, there will be a revulsion against continuance of relief work. The public agency cannot express any more than the majority of the social will. The most important part of the social program is the preservation of family life and establishment of proper relationship between the parent and child and the family and community. If you are going to do nothing more than to fill up a man's stomach, you are practicing jungleism. That is not civilization. 'Man cannot live by bread, alone.'"

Seated at the Auxiliary Table were: Mrs. Hugh Nelson Leavell, Miss Susie Rodman, Mrs. George A. Hendon, Mrs. L. Lyne Smith, Mrs. Frank J. Dougherty, Mrs. John L. Jones, Mrs. E. L. Pirkey and Mrs. John W. Kremer. Additional members at other tables were: Mrs. Emmett F. Horine, Mrs. Leon Solomon, Mrs. Hugh R. Leavell, Mrs. S. C. McCoy and Mrs. A. T. McCormack.

## THE ANNUAL MEETING

Plans and arrangements by the Hostess Auxiliary, Harlan County, are well under way for the entertainment of the members attending the Annual Meeting in Harlan, October 1-4. Mrs. Clark Bailey is Chairman of Arrangements with Mrs. W. R. Parks, Chairman of Credentials and Registration. Other Committee Chairmen are: Reception, Mrs. M. L. Gunn; Transportation, Mrs. W. P. Cawood; Information, Mrs. E. M. Howard; Luncheon, Mrs. S. H. Rowland; Music, Mrs. W. E. Riley; Flowers, Mrs. E. W. Aiken; Golf, Mrs. P. O. Lewis; Publicity, Mrs. C. E. Abel.

The hospitality of the mountain people and the glorious beauty of their section of the State, particularly when the trees are adorned in their colorful autumn dress, will, undoubtedly, make this a most memorable conference.

## HISTORY OF THE NATIONAL

Arrayed in a colorful cover of crimson, comes a welcome wee volume of note to the Editor's desk. Lettered in black, the title reads, "The First Twelve Years, 1922-1934, The Woman's Auxiliary to the American Medical Association." Dedicated to The Pioneers, this attractive and informative record book of 48 pages is the product of the pen of Mrs. Willard Bartlett, St. Louis, Missouri, Historian of the Woman's Auxiliary to the American Medical Association during the 1933-1934 administration. Here is a real contribution of lasting value, to Auxiliary members throughout the country, which cannot fail to promote pride in the pioneers for their constructive work during the formative years and which should stimulate those who follow in their footsteps to greater endeavor for continued and enlarged usefulness as the privileged handmaidens of the medical profession. Listed in the Contents are:—Dedication: Historian's Note: Foreword by the President: The Family Tree: Roster of National Officers and Boards 1922-1934: The First Twelve Years: State Histories in Outline (38): Guide for Historians.

Kentucky members attending the Annual Meeting in Murray last year will recall with pleasure that Mrs. Bartlett with her husband, Dr. Willard Bartlett, were honored guests of the State Association Convention when Mrs. Bartlett spoke on "The First Decade and Present Trends" at the Auxiliary Annual Luncheon and Dr. Bartlett addressed the Association, following the Annual Dinner, on "A Consideration of Four Eras in Medicine as a Basis for a Prophesy." Histroy-minded, appears the Bartlett family!

## NOTABLE REPORT FROM MISSOURI

Missouri scored successfully in its Essay Contest on the subject of "What the National, State and Local Governments Are Doing For Health." Congratulations to the Missouri Auxiliary with a special "curtsey" to the Essay Chairman, Mrs. W. H. Goodson!

With 500 completed essays as the State goal when the contest opened last October (See April issue, page 45, Woman's Auxiliary Section for announcement and program) Mrs. Goodson writes that the contest closed April 1, 1934 with the following results:

"13 of our 21 County Auxiliaries sponsored the Essay Contest and over 900 essays were written. We were surprised and gratified at the excellence of the essays, since reference material was rather hard to obtain. Some of the material written for did not come. The subject was large ********One city had the essay contest made a school project and this produced over 400 essays.****** Of course, but one essay from the Senior High School and one essay from the Junior High School could be entered from each Auxiliary for the State Prizes. Mrs. Talbott has arranged to have an address on Public Health at our Convention Banquet, in May, thus rounding up our year's work quite fully."

Kentucky might well follow this splendid example of Missouri and develop in the schools, through the stimulation of the County Auxiliaries, a similar interest in what the National, State and local governments are doing for health.

## OUR LOSS IS UTAH'S GAIN

Our Radio Chairman, Mrs. John Lewis Jones, has moved with Dr. Jones and their two sons, Rheim, 14, and Myles, 3, to Salt Lake City, Utah, where Dr. Jones has accepted the position of Assistant State Health Officer and Epidemiologist of his native State. It is also the native State of Mrs. Jones. Rheim, a student at Male High who has made unusual advance in Boy Scout activities and done outstanding work with his violin in the Little Symphony Orchestra, remained in Louisville with friends until the close of school. Then, in company with a motoring friend, followed his parents and younger brother to the new home in Utah.

We miss the Jones family. They had all endeared themselves to a host of friends in Kentucky where Dr. and Mrs. Jones had worked, jointly, for the benefit of the medical profession —he with the physicians and she with the Auxiliary. In this issue of our Supplement to the Kentucky Medical Journal, there is no column known as Radio Waves. Mrs. Jones has con-

ducted this up-to-the-minute feature for over two years. As yet, we have no one to fill her place.

Working first on the State Radio Committee with the late Mrs. W. A. Onderdonk as Chairman, Mrs. Jones, upon the death of Mrs. Onderdonk, took over this Chairmanship, even though Myles, her Kentucky son, was but 8 months old and, necessarily, in need of much care, and time, from his mother, But, Mrs. Jones seemed, always, to have time for everything. Perhaps, she has learned that secret we all need to learn—how to budget Time! During the past year, Mrs. Jones has been Chairman of the Telephone Committee for the Jefferson County Auxiliary and secured excellent results, climaxed by her unremitting services right up to the day before departure, April 30th, when she also acted as Chairman of the Committee that solicited all the refreshments for the Tea following the Style Show given at the Architects and Builders Club on Friday afternoon, April 29th.

A Dinner, in honor of Dr. and Mrs. Jones, was attended by 115 friends from several counties, at the Pendennis Club on Tuesday evening, April 24th when farewell addresses were supplemented by beautiful and useful silver gifts of remembrance from the associates of Dr. Jones at the headquarters offices of the State Board of Health.

May success and happiness continue to attend the Jones Family!

---

## PRELIMINARY PROGRAM

### TWELFTH ANNUAL MEETING
of the
### WOMAN'S AUXILIARY
to the
### KENTUCKY STATE MEDICAL ASSOCIATION
**Methodist Episcopal Church**
**Harlan, Kentucky**

**October 1-2-3-4, 1934**

Every woman attending the convention is cordially invited to attend all of these meetings.

All meetings, unless otherwise indicated, will be held at the Methodist Episcopal Church.

**Monday, October 1**
**9:00 A. M.-4:00 P. M.**

Registration.....Methodist Episcopal Church
(Every Woman is requested to register immediately upon arrival).

**11:00 A. M.**

Study Class.....

**2:00 P. M.**

Round Table Conference.....

**3:45 P. M.**

Pre-Convention Board Meeting.....
Mrs. B. K. Menefee, Covington, Presiding
(All County Presidents, State Officers and Chairmen are urged to be present. All members are invited.)

**8:00 P. M.**

President's Report to the House of Delegates
Mrs. B. K. Menefee, Covington

**Tuesday, October 2**
**9:00 A. M.-12:00 M**

Registration.....M. E. Church

**9:00 A. M.**

Joint Meeting with the Kentucky State Medical Association
Installation of the President of the Kentucky State Medical Association

**Opening Session, General Meeting**
**9:45 A. M.**

Presiding Officer.....Mrs. B. K. Menefee, Covington, President
Song .....
Invocation.....Rev. Carl E. Vogel, Pastor, M. E. Church, Harlan
Address of Welcome...Mrs. J. W. Nolan, Harlan
Response
Messages from Kentucky Medical Association:
W. M. Martin, M. D., Harlan, President
C. C. Howard, M. D., Glasgow, President-Elect
Advisory Council:
W. E. Gardner, M. D., Louisville,
A. T. McCormack, M. D., Louisville,
V. A. Stilley, M. D., Benton.
Reports of Committees:
Arrangements..Mrs. Clark Bailey, Harlan
Credentials....Mrs. W. R. Parks, Harlan
Roll Call
Minutes of the Eleventh Annual Meeting
Report of the President....Mrs. B. K. Menefee,
Reports of County Delegates
Announcements
In Memoriam.....
Recess

**12:30 P. M.**

Subscription Luncheon

**Wednesday, October 3**
**9:00-12:00 M.**

Registration.....M. E. Church

**Second Session, General Meeting**

Presiding Officer.....Mrs. B. K. Menefee, Covington
Reports:
Officers:
Chairmen of Committees
Delegates:
Woman's Auxiliary to the American Medical Association
Mrs. J. I. Greenwell, New Haven
Woman's Auxiliary to the Southern Medical Association
Mrs. A. D. Steely, Bardstown
Unfinished Business
New Business
Report of Committee on Resolutions
Report of Committee on Credentials
Report of Nominating Committee
Election of Officers
Introduction of New Officers

Installation
Address of the President....Mrs. J. I. Greenwell
New Haven
Adjournment

**Wednesday, October 3**

**12:30 P. M.**

Annual Luncheon, Subscription
Toast Mistress...Mrs. B. K. Menefee, Covington
Honoring our National and Southern Presidents:
Mrs. Robert W. Tomlinson, Wilmington, Delaware
Mrs. Southgate Leigh, Norfolk, Virginia
Address
Mrs. Mary Breckenridge, R. N. Director
The Frontier Nursing Service, Inc.
Special Guests Representing the Kentucky State Medical Association;
W. M. Martin, M. D., Harlan
C. C. Howard, M. D., Glasgow
Our Advisory Council:
W. E. Gardner, M. D., Louisville
A. T. McCormack, M. D., Louisville
V. A. Stilley, M. D., Benton

**2:30 P. M.**

Post Convention Board Meeting.....
...Mrs. J. I. Greenwell, New Haven, Presiding
(All County Presidents, State Officers and Chairmen are urged to be present. All members are invited. Plans for the coming year will be considered, your suggestions are earnestly requested.)

**6:30 P. M.**

Annual Dinner of the Kentucky State Medical Association

## LAWS RELATING TO WOMEN SIMPLIFIED

**Mrs. George S. Brock, London, Parliamentarian**

Making its debut in neat attire of white and green, Club colors, came another compilation of Kentucky Laws to the recent Annual Convention of the Federated Women's Clubs in Louisville. Couched in simple, easily understood, plain English words, one may readily acquire a definite, working knowledge of what our laws, (so formidable and, to most of us, incomprehensible as found in Carroll's Statutes) contain that pertain particularly to women.

Mrs. L. G. Davidson, Lancaster, First Vice-President of the Kentucky State Federation of Women's Clubs, did the monumental work of compiling this material and the Federation assumed the responsibility of financing the publication. Copies at 5c each, may be obtained from Mrs. H. C. Hawkins, 221 Birchwood, Louisville. We quote Mrs. Davidson's brief foreword:

**"Legal Status of Women in Kentucky"**

"Compilation of the laws affecting the legal status and property rights of women in Kentucky, is not an abridgment of all the laws of the state, but a compilation of those provisions of the statutes of most concern to women in general. These topics are clothed in plain language and can be readily understood by all.

"This booklet has been prepared to give women a better understanding of their duties to the state, and their reciprocal duties to their fellow-citizens, pointing out to them at the same time, their rights under the law."

Of the several States where this type of compilation has been made, there is but one, and that one Kentucky, which has any law relating to the care of expectant mothers. We quote Mrs. Davidson's paragraph on that law.

**"Health"**

"The State Board of Health is a governing board of nine members, cooperating with other health organizations together with individuals for protection and promotion of the public health in the prevention and control of unnecessary disease in all parts of the state. This work includes the promotion of better care for expectant **mothers, babies and children**--health education in the schools—prevention of epidemics and communicable diseases, prevention of trachoma and blindness by proper treatment; secures and makes permanent record of the births of all babies born in Kentucky and of the death of each of its citizens. The courts may impose fines for failure of any person to comply with the enforcement of health laws, rules and regulations adopted by the State Board of Health."

May I not remind County Presidents and Chairmen of Organization Committees that new members of the Auxiliary should be directed to a study of the simple compilation of the Medical and Health Laws, prepared in 1929 by the Auxiliary for our better understanding of the laws that relate to the medical profession? Copies of this compilation are obtainable **Free,** by writing to the Bureau of Public Health Education, State Board of Health, Louisville.

## ARCHIVES!

In compiling Scrap Books for the Woman's Auxiliary to the Kentucky State Medical Association, and for the Woman's Auxiliary to the American Medical Association, we find almost no clippings from the State outside of Jefferson County. To be complete, publicity from all parts of Kentucky, where there are Auxiliaries, should be included.

We feel sure that this state of affairs is not intentional, but is the result of thoughtlessness in regard to the importance of, first: Seeing that publicity of any activities pertaining to your Auxiliary is sent to your local paper. And, second: Seeing that any publicity is clipped and forwarded to the Chairman of Archives, 615 Brown Building, Louisville, Ky.

Will you do this, beginning right now?

(Mrs. George A.) Jessie P. Hendon,
Chairman.

# THE JANE TODD CRAWFORD MEMORIAL




Courtesy of Dr. C. C. Howard

**Dr. Ephraim McDowell, "Father of Ovariotomy." Mrs. Jane Todd Crawford, "Mother of Ovariotomy"**

This picture of Dr. McDowell is a copy of the portrait he gave his oldest daughter, Susannah Hart Shelby McDowell, as a bridal gift when she married Colonel David Irvine of Richmond, Kentucky in 1820. It hangs in the parlor of the old Irvine Home, now the Irvine-McDowell Memorial Trachoma Hospital, Richmond. It is the property of the Kentucky State Medical Association. This picture of Mrs. Crawford was reconstructed, January, 1934, upon the suggestion of Dr. C. C. Howard, from a copy of the Goldsmith woodcut, by Mr. F. R. Palmore, Glasgow, Photographer.

## "LIFE BEGINS AT FORTY"

**Mrs. A. T. McCormack, Louisville.**

The Fortieth Annual Convention of the Kentucky Federation of Women's Clubs held May 7-9, 1934, at the Brown Hotel, Louisville, was unusual in many respects. Chief of these perhaps, appeared to be the determination to face life squarely, unafraid, confident of success in enlarged fields of usefulness, as the result of enlightening experience gained in past endeavor.

The address of the President of the General Federation, Mrs. Grace Morrison Poole, Brockton, Massachusetts, on "The Challenge of the New Deal," called for sober thought and a check-up on where we stand in this modern scheme of life. Mrs. E. H. Heller, Louisville, our own State Federation President, chose as her theme, and as the theme for the Convention, "Life Begins At Forty." All indications point to the suggestion that this 40 year old organization is just beginning to know the meaning of life.

In an effort to complete the files of the archives of the State Federation, Judge Fanniebelle Sutherland called for the missing issues of The Club Woman, Official Bulletin of the Federation, and displayed a yellowed copy of Volume I, Number 2, then named The Kentucky Woman's Journal. This was the first volume published under the management of the Federation, with Mrs. J. H. Dickey, Louisville, Editor. In previous years, however, Bulletins had been published for the Federation by the State Board of Health.

Miss Louise Morel, State Chairman of Public Welfare, called attention to the facts that the Federation then, as now, was actively working for Child Welfare in co-operation with the Children's Bureau, Washington; that it was in the fight against Tuberculosis, with emphasis on the sale of Christmas Seals; and that it was helping to promote the Full-Time County Health Unit, then known as the All-Time Health Officer project.

Difficulty in financing this first publication, through annual subscriptions of 50c and the sale of advertising space, together with difficulty with the Postal Regulations, rings familiar to us who, in later years, are attempting a like project.

Listed in the Directory of the Officers are names of many friends, some still active in Club

(Continued on Page 86)

# CANCER CONTROL

## CANCER CONSCIOUSNESS

**Mrs. J. Duffy Hancock, Louisville.**

Our physician husbands, sons, and fathers are, generally speaking, a rather modest lot. Few seek the limelight of publicity. They are busy as a fact-finding group and are actively eager to use those facts in the prevention, relief or cure of disease. Few, with the exception of the specialists in public health work, have the time or inclination to engage in propaganda work. Without propaganda, or health education, the public is unaware of what inestimable value the services of the present-day physician can be to the individual. It is the duty of the various lay organizations, in general, and of ours in particular, to present these facts in a popular way and to urge the public to take advantage of such information.

The control of tuberculosis well illustrates this point. At the beginning of the present century that disease ranked second among the captains of the army of death. Our doctors possessed the information and ability to handle this dread foe and when the public became sufficiently aroused to seek their aid the battle was half won. As a result of this campaign tuberculosis has dropped several notches among the causes of death; but in its old place, ranking second only to heart disease, is cancer definitely on a gradual increase.

While all of us know that cancer may occur at any age it is more common in the later decades. As more control is exercised over the infections and the communicable diseases, and as more children survive the fatal results of nutritional disorders, more people will live into the age where cancer is most prevalent. Statistics are often monotonous. Let us just remember, though, that over 100,000 people die of cancer each year in the United States alone—and women, because of the frequency of involvement of the organs peculiar to their sex, should be particularly interested.

There is, however, a bright side to the picture. We are told that the present methods of treatment, while disappointing in many advanced cases, are usually, satisfactory provided the case is seen early enough. The Annual Birthday Health Examination is an excellent movement and should receive our encouragement; but, we must do more in an effort to make people cancer conscious. A change in the appearance or function of any organ should indicate an immediate examination. Let us advise our friends not to play the ostrich act and try to explain these changes by some popular fallacy. If cancer is present let us know it early and begin treatment when it is most effective. If however, some other disease is causing the trouble, early treatment is here again, more effectual. And, in many instances from the Annual Birthday Health Examination we will receive the happy news that there is nothing organically wrong, thus saving us many needless worries.

## CANCER EDUCATION PROGRAM

Spurred by the slogan "Cancer thrives on ignorance; fight it with knowledge" the General Federation of Women's Clubs has launched their Cancer Education Program with an appeal that should result in a wide response from Club Women all over these United States.

One immediate activity is the establishment of a fund by means of a voluntary ten cent annual contribution from individual members to be known as the General Federation of Women's Clubs Cancer Control Fund. This Fund is for the purpose of furthering public education in cancer and to increase facilities for its diagnosis and treatment.

Co-operating with the General Federation, Miss Louise Morel, Chairman of the Public Welfare Department and of the Division of Public Health of the Kentucky Federation of Women's Clubs, is offering this project as a part of the summer's work for Kentucky Club Women.

## CHATTING

**Mrs. John C. Rogers, Louisville.**

(With a "Curtsy" to and a Smile of Appreciation for our Advertisers.)

Mrs. Jim Jones (Mary): "Oh, girls. Come and rest in the cool on our shady porch. Besides, you are just in time to watch the new doctor's family moving in next door. What fun! Right now, I can see a Stratton-Terstegge Electric Refrigerator—like ours, going in."

After a few blissful moments of swinging and candy-eating, Mrs. Brown (Anna) exclaimed: "Let's all pull hard for the new doctor's success. Edith, his wife, is already in deep, dark despair, and is absolutely sure that this burg can never, never, never take the place of her own dear home town. Edith can't talk about anything else but 'Williamstown'."

Mary: "Nonsense! Don't let her finish a sentence about anybody or anything in 'Williamstown'. We can soon make Edith see that Louisville is the mecca for shoppers if we do a little boosting. And, anyway, we must have her in our Auxiliary. Here she comes now."

Mary, Anna and Ella call out, (Oh, so sweetly): "Welcome" and say it with candy, and the porch swing and all the cushions.

Mrs. James Montgomery (Edith): Behold poor little me! The 'Stranger in a Strange Land!' But, really, I'm not a complete stranger because

I did meet you three girls at Alice's camp last summer. That helps some. May I use your telephone, Mary? Ours isn't in, yet. But then, I don't know whom to call to rescue the perishing. Here we Montgomerys are! Stomachs empty, clothes mussy, and car dusty! And wherever can I buy a new shingle for Dr. James? I want to surprise him with a new one for his new office on his birthday next Monday. Oh, for our dear old home stand-bys. Williamst—"

Anna: "Stand-bys! This town invented the word. Why, Braksmeier makes the best ever in shingles. Hungry? Late as it is, I know three wonderful groceries. You can call up, anytime, and immediately, the best and the freshest in meats, vegetables or anything your appetite craves will be on the way. I dare you to try Monde, Young or Deckel."

Ella: "True, enough. And, then, look at our drug-stores. Suppose you are in a wild rush to have a prescription filled or to get anything in the medical line. Calm yourself. Just call The Medical Arts, Louisville Apothecary, The Model Drug Store or Newman's and there is just exactly what you wish for at your very door before you can say 'Ouch', again."

Edith: "That's worth knowing. Back home they all knew Dr. James and all he had to do was—"

Anna: "Dr. James is wonderful, I hear. They say he adores reading. Just trot yourselves down to The Wilderness Road Book Shop and revel in the newest and the best in literature. For instance, secure the Pulitzer Prize Novel, Caroline Miller's 'Lamb in His Bosom'. Also you may enjoy Stribling's 'Unfinished Cathedral' or Erskine's 'Bachelor of Arts'. Better hurry."

Edith: "Indeed, we shall. I'll go places just as soon as I can get some new duds. I had a perfect dressmaker at home. Could make me a dress without—"

Mary: "Duds. Togs. Anna and Ella, please walk gracefully up and down this long porch. Now, girls twirl around. Don't they look exactly like models at a Style Show? That is what Jaglowicz and Walsh do for them and can do for you, too."

Ella: "As for mussy clothes, this town must have invented cleaning, too. Mary, it's your turn to be a model. Just feast your orbs on that gown of Mary's, with its snowy, pleated fluffy-ruffles down the front and at neck and wrist. Can you believe that that dress has been cleaned five times? Well, Mary pardon me. Two times, at least? And look at the snowy, frothy curtains at the windows. Well, the Swiss Cleaners and Shraders can do the same for you."

Edith: (Laughing delightedly) "You all know all the answers."

Suddenly, she remembered to thank the girls for filling her new home with welcoming flowers. She began to tell them how her florist in Williamstown remembered her birthday even, without being told but poor Edith was cut short by Mary.

Mary: "Did you say 'Florist'? Haupt is wonderful. You noticed how fresh, cheery and lasting those flowers are. Remember, Haupt is a real 'Stand-by'."

Edith: "Fine to know that. Another cheering thing is that Alice has invited all of us six starving straggley Montgomerys to dinner, tonight."

Anna: "Um! Um! Wish we were going. Alice will treat you all to that perfect, real ham. The Cadiz Kentucky Ham. Besides everything else, your children will fill up on Certified Milk, Donaldson's Rolls, Honey Krust Bread (Vitamin D) and Hampton's Graham Crackers with ice cream and other goodies, besides."

Edith: "Speaking of milk reminds me. Just when I was getting my spirits up, too. We had the most sanitary, marvelous dairy in Will—"

Anna: (jumping up and down) "Edith, did you mention the word, 'Dairy'? My dear, you should say Dairies. You shall have Ewing Von Allmen, The Kentucky Dairies, and The Cherokee Dairy, all way up to the top in sanitation and in nutritional benefits. Aren't we the luckiest people?"

Edith: "I will lose no more sleep over that dairy question. I really should go, but the cool shade rests my eyes after motoring. My Williamstown oculist understands my eyes and—"

Mary: "Excuse me for interrupting. But I must tell you about Ella's new photograph. We really think that Muth and the Southern Optical Company not only give you perfectly fitting eyeglasses but that they chase away wrinkles and make the eyes look good-looking, large and bright. You know, Ella looked so beautiful in her new specs that she flew around to Berry's and had a photograph made of herself, immediately."

Edith, (sighing a teeny bit): "I'll do both. It all sounds intriguing. But right now, I can only think of the dirt on my hands. House dusty, ants playfully chasing each other and cock roaches making merry around the kitchen sink."

Mary: "Poor dear. I'll present you with a roll of Miller's Nibrock Towels. Great to save laundering. As for dear old houses like yours, they often do have varmints. As for ants, just get The Louisville Chemical Company on the job and the merry makers will soon be raided and will vanish for good, immediately."

Edith: "With that good news, I'll have to stop crying in my plate. Look at our cars parked in the driveway. They are homesick for 'Pete' at our Service Station in our old ho—"

Ella: "I started to buy a new car but Etna and Stoll service my car so wonderfully that I shall wait a while. Just get Aetna Gas or Golden Tip and you can turn on a dime without a squeak."

(Continued on Page 86)

# Tuberculosis

Mrs. Lucius Ernest Smith, Louisville, State Chairman

## THE CHAIRMAN'S MESSAGE

The importance of renewed and vigorous efforts in the Tuberculosis control program is impressed upon us by a rising death rate.

It is true there were only 21 more deaths from Tuberculosis in 1933 than in 1932; yet it is a definite rise; and though it may have no important bearing on our State, those who study this disease, and its relation to economic conditions, recognize the real significance of this upward trend.

Tuberculosis workers are stressing the importance of finding it early. The old methods are giving way to newer and more sensitive ways of detecting the presence of the tubercle germs in the body before real damage has been done.

The tuberculin skin test is now being widely and wisely used in screening out children and young adults whose bodies have been infected with tubercle germs. These reactors are then x-rayed to find whether the infection has caused disease. Our readers will be interested in a special article in the June issue of the Kentucky Medical Journal page 277.

In a group of 200,000 tuberculin tested children, between 5 and 15 years of age, 28 per cent were found to be infected with tubercle germs. These were all x-rayed and 5 per cent showed some damage; while only 1 per cent showed damage serious enough to require continued medical care.

Thus we can see this is a good way to find Tuberculosis early and it also helps to find many unrecognized sources of infection in the homes and schools.

This year the Kentucky Tuberculosis Association and the State Board of Health are striving to bring the value of this test, and the practical follow-up program, to the attention of physicians, teachers, social workers, parents and children.

Our splendid Parent-Teachers Association is joining us in an effort to make this a part of the summer school round-up of preschool children, and also encourage the high schools to adopt this simple and practical test in their health programs.

Surely this is a worth-while project and our readers are well qualified to take a leading part in this great educational program of finding Tuberculosis. Our Tuberculosis chairmen can find many opportunities for leadership in a way that will bear much fruit and at the same time create a closer fellowship and a better understanding between the local physicians and the public.

Our communities need us. Our children need us. Let us make this a part of our program, and in reality join the crusade to save our loved ones, our neighbors and our State from Tuberculosis.

## VOICES FROM THE FIELD

CALLOWAY COUNTY—Mrs. J. A. Outland distributed special literature to all physicians in her county during April: as well as created interest in special radio programs.

JEFFERSON COUNTY—Mrs. R. L. Hudson and committee, assisted in advertising special radio programs in April. They also encouraged the distribution of special literature to physicians, and in creating interest in the National Tuberculosis Association meeting in Cincinnati.

MARSHALL COUNTY—Mrs. S. L. Henson has been helpful in seeing that her physicians were supplied with special literature and were aware of the special radio programs.

NELSON COUNTY—Mrs. Laura B. Summers never disappoints us when she is asked to render service. Special literature. radio programs and all opportunities for service are welcomed by her.

The State Chairman is grateful to all who have responded and takes this opportunity to thank them for making the year's work so pleasant and interesting.

## T B—LETS

The most important thing about Tb. is to find it early.

Tb. in the early stages shows no physical signs or symptoms.

Tb. skin test finds Tb. The x-ray shows where it is, and how far it has developed.

Tb. spreads like fire—stop it.

Tb. is three times more dangerous to negroes than to white people. This is largely a matter of living conditions.

It is better to care for the consumptive in the right way, and at the right time until he is cured; instead of in the wrong way at the wrong time till he is dead.

After influenza, take time to get well. It is not a long step to tuberculosis.

Every food handler should be carefully examined for tuberculosis.

Every one working in homes or schools should include a chest x-ray in their examination.

He, who prescribes medicine for himself, guided by his own diagnosis, wastes his money.

Go to your doctor before he has to come to you. It is safer and cheaper.

# CHILD HEALTH AND WELFARE

Mrs. Philip Foster Barbour, Louisville, Chairman

## A LETTER FROM THE CHAIRMAN

June 1, 1934.

My dear "Wives, Mothers, Sisters and Daughters:"

So appreciative am I of your many responses to my first letter, that I would like to write personally to each one, acknowledging my gratitude for your interest, and answer your many questions as individual to individual. Possibly, I may enjoy that privilege soon.

But, today, perhaps it is best to take one letter for the basis of a general reply as this letter comes from one who is a wife, mother and sister of a physician. Isn't that a fine combination of "titles?" And—she is also a teacher! If one with such a many-sided experience asks help on problems, maybe these same questions come to the minds of others. Here is one of her questions relating to Public Health.

"Out of 216 children in the schools of the town, only about 1/3 have been vaccinated against smallpox and only a very few have been informed as to the other necessary vaccines for child health protection." Being a former, as well as a present, public school teacher, this Doctor's Wife knows the dangers of these school conditions where "children have no protection from the communicable diseases."

"What can be done?"

Information can be secured from the State Board of Health at Louisville, merely by asking or writing for it, which, in the hands of such an intelligent and interested worker, together with the co-operation of the informed members of the Woman's Club, can be made attractive and potent in arousing the attention of parents. One method I would advise, from experience, is to arrange a Mothers' or Parent-Teachers' Meeting which may be addressed by an informed person who will, unhesitatingly, present the necessity for definite action at the earliest time in the near future. Make it a popular campaign for Health and have a slogan of some kind about "Every Child—etc., etc., etc." Do not let the school session of 1934-1935 face such dangers for your children and youth.

This aroused doctor's wife is also interested enough to express a desire to join our State Auxiliary. We will certainly give her a hearty welcome.

Are there not some others?

Let me hear.

Yours cordially,

(Mrs. Philip F.) Elizabeth Akin Barbour.

* * * * * *

Very often I hear interesting "sayings" that help me in my study of the "contents of children's minds and of child reasonings." These sometimes assist in understanding the little people all the better.

Tommy is 8 years old and loves to ride Prince, the pony, owned by Cousin Florence. One day Florence said: "Tommy, I wouldn't ride Prince today. I think he has distemper." Tommy answered: "Oh, I think you must be mistaken. He was in a perfectly good humor yesterday."

* * * * * *

Charles, aged 5 years, is saddened by the absence of his mother who has been in a Sanitarium for more than a year. He had heard members of the family express the opinion that his mother's illness had been made worse by the smoking of too many cigarettes. One day, his father, Captain Jones, asked the Aunt in charge of the household if she had seen anything of his box of cigars. She answered that she had noticed it in the children's room. When they inquired of Charles, who, acknowledging he had removed the box, replied, that if mother was made sick by little cigarettes, he didn't want his father made sick too, by those big cigars. The very wise father fell in with the child's mood and allowed Charles to remain custodian of the box; and, agreeing that three cigars a day should be sufficient, received from the child's own hand, his daily allotment.

Thus a comraderie was established and, also, a lesson in moderation was started.

## THE BETTER FILMS COUNCIL

Mrs. Emmet F. Horine, Louisville.

The Better Films Council organized in Louisville, February, 1934 is, at length, well under way with a two fold program. First we hope to educate our own members in the possibilities for both good and ill in the "movies." Later, we plan to extend that educational program throughout the city through our thirty-five constituent organizations. Then, with such educated public opinion creating a demand for the good, there should be evidenced an argument in box-office receipts. For exhibitors, as for most of us, money does talk—but we want it to speak for the good, not for the bad movies.

The following are the committees under which, for the present, the Film Council will function:

A. Research as to the
   1. Operation of similar organizations elsewhere
   2. Available censored lists
   3. Persons making such lists

B. Speakers

   This committee will undertake to provide informed speakers on the movie

situation for any organization and will seek opportunities for such programs.

**C. Publicity.**

Keeping its emphasis upon the positive side, our purpose is to commend, through the press, those movies which are of such commendation and those exhibitors who will cooperate in providing such films.

**D. Program For:**

(1) Film Council meetings

(2) Any public meetings of Council

**E. Current Legislation**

In conformity with the rulings of several of our constituent organizations we must not, as a Council, carry on any legislative program. However, we feel that we must be informed as to all possible angles of any pending legislation as it affects the movie industry. Therefore, it becomes the duty of this committee to so inform us.

**F. Finance**

Our contributions are upon a voluntary basis as several of our organizations are not permitted to pay dues. Expenditures will be kept at a minimum.

**G. Telephone**

This committee will doubtless prove very important as it holds itself ready in all emergencies where quick action may be required.

(Ed. Note: Mrs. Horine is President of this organization.)

## BOOK REVIEW

## PRIVATE WORLDS

**Mrs. W. C. Dugan, Finchville.**

Private Worlds, written by Phyllis Bottome, has this foreword on its jacket cover written by herself:—"I have tried to pour into this book, all that I know of love and friendship—the ties that give to each human being, freedom and security."

Private Worlds is the story of a private hospital for the mentally deranged. Jane Everest and Alec McGregor were fellow physicians in this hospital in the west of England. There had grown up an intimacy between them based on their mutual interests. Alec's new, young wife was also close to Jane. In fact, between the three of them was a deep and beautiful friendship. When a new superintendent for the hospital was appointed instead of Alec, who had applied for the position, it was a great disappointment to the three. Alec determined to see no good in the new Doctor, Charles Drummond, but Jane could not side with Alec even though the new Doctor gave her to understand that he distrusted all women, and especially women doctors. But, an attraction sprang up between them and Jane could not help but treat Dr. Drummond as a friend. Alec, however, remained unreconciled. He became involved with Dr. Drummond's beautiful but reckless sister, which almost caused Alec's young wife to lose her mind, but in the end Alec and his wife reach an enduring basis for their love. Dr. Drummond and Jane confess their love for each other and the reckless sister of Dr. Drummond leaves for parts unknown.

It is most readable. You have romance, excitement; and, with its back-ground of hospital wards, the queer insane folk who dwell in them, and the always-threat of danger, which constantly keep the reader's interest keyed and make the book rather unusual.

Published by Houghton Mifflin Co., Boston and New York. 1934. 342 pages. For sale at Wilderness Road Book Shop, Louisville. $2.50.

## AMPUTATION OF LEG OF GEORGE ROGERS CLARK

**Mrs. A. T. McCormack, Louisville.**

Extract from a letter written April 24, 1809, by George Rogers Clark Sullivan, Louisville, to Mr. John O'Fallon, nephew of Clark and oldest son of Dr. James O'Fallon, formerly a practicing physician of Louisville but then living "near Lexington." Dr. O'Fallon married Miss Fannie Clark, a sister of George Rogers Clark.

The amputation was performed by Dr. Richard Ferguson of Louisville, assisted by Dr. John Collins, Louisville. Dr. William Craig Galt was Gen. Clark's physician during his last years.

"Your Uncle George is with us and in high spirits, and the wound healed up. I have staid with him every night since he has been in town, that is about five weeks. I never knew a man in my life to stand it so well as he, and the day it was taken off he sent for the drummer and fifer to come and play. Floyd* then took the hint and had all the men placed around the house with two drums and two fifes, and played for about two hours, and his leg was taken off in the meantime. In the evening they returned and played for about an hour, and then ten at night four elegant violins, two drums and two fifes marched around the house for about an hour, playing elegant marches."

Original letter at The Filson Club. Also, published on page 870, Vol. 2, Conquest of the Country Northwest of the Ohio River, 1778-83. Life of George Rogers Clark. By William Hayden English. 1890. p. 869. Life of George Rogers Clark, by Temple Bodley. See footnote, p. 365.

*His namesake, Colonel George Rogers Clark Floyd.

## PIONEERS PRACTICED CONTRACT MEDICINE

**Mrs. A. T. McCormack, Louisville.**

Many of the valuable old records of pioneer Kentucky can be found only in the Archives of the Massachusetts Historical Society, the Boston Public Library, the University of Chicago and the Wisconsin State Historical Society. Fortunately, before it was altogether too late, one of our citizens, Mr. Rogers Clark Ballard Thruston, Louisville, recognized the deplorable condition of our Kentucky archives and was aroused by the lack of responsibility evidenced by those in authority and by those who knew, or privately held col-

lections of, some historical data. As a beneficial consequence, the moribund history club of Louisville, The Filson Club, was revived and injected with new life and, largely through Mr. Thruston's personal generosity, provided with a commodious fire-proof home of its own to protect and properly care for records which, steadily increasing, are now searched by historians, many of whom come from distant states. On May 15th, in celebration of its 50 years of service, a happy throng of members and friends gathered at the Club House to congratulate the President, Mr. Thruston, and his staff, and to wish them continued success as they launch out, 500 members strong, into the Golden Era initiated by this Golden Anniversary of history collection.

One of the generous and painstaking projects undertaken by Mr. Thruston, was that of securing copies, photostatic and typewritten, of the Kentucky papers in the Draper Collection at Madison, Wisconsin. This is an extremely exacting and expensive process but appears to be the only way that Kentucky, once she negligently allowed her treasures to go elsewhere, can again secure copies of her own records. The task is far from complete and need of funds has halted the present procedure. However, students of pioneer life in Kentucky will find profitable and entertaining material in the documents already on file and graciously supplied by the courteous staff members who are, seemingly, already interested in every research subject connected in any possible way with Kentucky.

Auxiliary members—and, perhaps, their husbands—will be interested in the following copy of an early document showing that contract medicine in Kentucky is as old as the State:

## Draper Collection

**Wisconsin State Historical Society**
**Madison, Wisconsin**
**Draper MSS. 4 C C 1 6 8, A. D. S.***
(Copy filed at The Filson Club)

Kentucky, Octr. the 15th, 1792.

Whereas sundry propositions have been made to me, to settle, as a practicing Physician, in or about Louisville—and assurances given (on my statement of the difficulties which may arise to my obtaining a fit compensation for my services in Jefferson County) that, among the more wealthy and independent of that county, many may be found who would cheerfully, for my attendance on their families, subscribe each in a Sum, annually to be paid, which would amount, in the whole, to an annuity worthy of my notice; and would, in conjunction with my general practice prove adequate to a yearly revenue, amply compensating my labour and expences.

These therefore are to declare, and I do hereby promise, that to such friendly Subscribers, and to their respective families both white and black, I shall, when called on, give every attendance in my power, and is customary in such cases; as well by furnishing fit medicines for all their existing diseases, as by administring advice to the best of my skill, and (in preference to all other calls) by affording to them and their's the closest attendance dividing my services among them as the importance of their different cases shall or may require; the period of my attendance to commence, so soon as the Subscriptions shall have been filled up, and I informing the subscribing parties to this instrument that I am ready: On Condition, that each shall subscribe adequately to the distance his place of residence is from Louisville, and to the Souls composing his family, as it shall appear to me; and on condition likewise, that I be paid **in cash,** or in **merchantable** productions of the country at **cash price**—and that the whole of the amount subscribed for, and to be annually paid to me shall not be less than **one hundred & fifty pounds,** Virginia Currency.

As Witness my Hand
James O'Fallon

[Endorsed:] Proposal of Docr. O'Fallon These signitures were finished December the 10th, 1792.

**(Draper MSS, 4 C C 1 6 8)**
(Reverse of page)

We, the Underwritten, having perused the foregoing Instrument of obligation from Doctor James O'Fallon, and having closed with the terms contained in the same, do, for ourselves, our heirs, executors and administrators, covenant, promise and engage, yearly and every year, (so long as he shall attend on us and our families, as therein recited, until discharged—and particularly and absolutely for the coming year) truely, faithfully, and without default, to pay unto the said Doctor James O'Fallon, his heirs, executors, administrators, or assigns, the Sums hereunto annexed, and correspondent to our names, as the subscription and Salary to him annually to be paid, from each and every of us respectively:

As Witness our hands.

It is hereby understood, that, should the Doctor (in case of any event, now unforeseen, be called away from Louisville) then and in such case, each of us is to pay adequately to the time he has attended us.

So witness our hands

| Subscribers Names | Sums subscribed for |
|---|---|
| Philip Buckner | twenty Pounds |
| X John Harrison p. | Three pounds |
| Will Johnston Recd. this Sum | Five pounds |
| X Ga. J. Johnston | Four pounds |
| Thos. M. Winn | Thirty Shillings |
| Richard C. Anderson | five pounds |
| Will Christy | Two pounds |
| X John Thurston p. | Ten pounds |
| Mr. La Cassagne | Three pounds |

*A. D. S. Authorized Document Signed.

## FROM A FRIEND

Orchard Hill, Louisville, Kentucky
May 11, 1934

Mrs. Arthur T. McCormack,
Dear Madam:

I take the liberty of sending you "something of a poem," "The Mother's Pelvis," which I had the honor and privilege of delivering to a class of students at the University of Louisville.

A beautiful little "Poem For Mothers," which appeared in the April number of the Woman's Auxiliary Section of the Kentucky Medical Journal, acted as an incentive to sending you this "stuff" with the hope it may be worthy of a place in your excellent publication.

Respectfully,
Wm. B. Doherty.

## THE MOTHER'S PELVIS

**William Brown Doherty, M. D.**
**Emeritus Professor University of Louisville**

(Delivered annually, 1906-1923, to the class of students in obstetrics while holding in his hand and demonstrating the bony structure of the female pelvis.)

Behold this ruin! 'Tis a bony bowl,
Around its brim we once were wont to roll,
To toss and turn, 'mid amniotic spray,
Whilst waiting restless for our natal day.
In like we dwelt for nine long months or more
'Til launched with pain upon this pubic shore.

Within this realm we had a generous home,
Supplied were all our needs within the womb,
Fed wondrously, without a breath of air,
From mother's heart: and with a mother's care,
By cord secured we gamboled in our sphere—
Oft mother's joy, less often mother's fear.

Through narrow straits we came, our progress slow.
The womb contracts, the floor resists below,
A pain, a rest, a pain yet more severe,
A wail, a cry, an eye bedewed with tear.
Our mothers suffered thus, in travail's throe,
While pressed and forced we came for weal and woe.

Dynamic pelvis—now an empty bowl—
Is where was joined a body to a soul.
Soon, mother's love forgets a mother's pain
Who finds her solace in her offspring's gain,
Full glad a child she's given to the world
With high and lasting destiny unfurled.

But, what is Life? A cell the secret holds,
The oosperm small. How great what it unfolds!
It's certain life commences in a cell.
Just how? Just when? What scientist can tell?
Life's product fills a whole world's history
Though Life itself remains a mystery.

Is Life not power, fount of joy and glory?
May no one's Life appear an empty story.
Be this our purpose, this our constant aim:
To strive for record on the Scroll of Fame,
And, as Physicians, nobly do our part—
Bring no disgrace on this Obstetric Art.

## FOUNDERS WEEK AT UNIVERSITY OF LOUISVILLE

Founders Week was celebrated at the University of Louisville during the first week of April with special visiting days assigned each school. Exhibits and specially prepared programs helped the visitors to better understand the trend of the times in University education.

Following the luncheon of the University Woman's Club on Friday, April 6th, a brief sketch of the history of the six Schools—Medicine, Law, Dentistry, Liberal Arts, Speed Scientific, Music—were given. The School of Medicine was represented by two of our members. Fortunately, we are, here, privileged to pass their contributions on to our readers.

## EARLY HISTORY OF THE UNIVERSITY OF LOUISVILLE SCHOOL OF MEDICINE*

**Mrs. George A. Hendon, Louisville.**

With the purpose of advancing Medical Science, the University of Louisville, School of Medicine, has cause to be proud of its accomplishments in a record of continuous service for more than one hundred years.

When founded the school was known as "The Medical Institute of the City of Louisville," the law authorizing its establishment was approved on February 2, 1833, and is the first Municipal Medical School in the United States. Dr. Lewis Rogers states that Dr. Alban Goldsmith, a former associate of Dr. Ephraim McDowell, was instrumental in securing the charter from the State Legislature.

The Board of Managers of the Louisville Medical Institute made application to the Mayor and City Council of Louisville to make some definite grant to the Medical Institute, the proposal being introduced by the Hon. James Guthrie, and on March 6, 1837, a resolution was passed designating the square bounded by eighth and ninth, and Chestnut and Magazine Streets for college use, and appropriating the sum of $30,000 for the erection of suitable buildings, provided the Board of Trustees raised "by subscription or otherwise, a sufficient sum to purchase a library and apparatus."

Later, on April 3, 1837, the Mayor and Council passed the necessary resolutions granting the site proposed, called "College Square," appropriating $30,000 for the erection of necessary buildings for the Medical Institute, and $20,000 in cash for the purpose of purchasing a library, anatomical museum and the requisite apparatus, the management and control of the school to be conveyed to and placed under the direction of the President and managers of the Medical Institute of Louisville.

It was agreed at a meeting of the Board of Managers that there should be seven teachers of professional rank, the first professor being Henry

M. Miller, a graduate of Transylvania, who was to head the Department of Obstetrics and Diseases of Women and Children. Next, Charles Caldwell, a graduate of the University of Pennsylvania, was elected Professor of the Institutes of Medicine and Clinical Practice and Medical Jurisprudence. During the summer of 1837 four other teachers were selected: John Esten Cooke, a graduate of the University of Pennsylvania, Professor of the Theory and Practice of Medicine; Lunsford Pitts Yandell, a graduate of Transylvania, Professor of Materia Medica, Lecturer on Chemistry and Dean of the Faculty; Joshua B. Flint, a graduate of Harvard, Professor of Surgery; and Jedediah Cobb, a graduate of Bowdoin, Professor of Anatomy. William H. Donne was made Demonstrator of Anatomy.

The introductory lecture at the opening of the Louisville Medical Institute was delivered on October 31, 1837 by Dr. Charles Caldwell. The Institute seemed to fill a real need, for 80 medical students were present during the first course of lectures. In addition there was a Medical Jurisprudence Class of 20, thus making the enrollment 100; the students coming from fourteen states exclusive of Kentucky. The lectures were delivered in an improvised hall on the upper floor of the City Work House standing on a part of the square which had been granted to the Institute. The first Commencement was held in the Second Presbyterian Church on Friday, March 2nd, 1838, and twenty-four candidates received the degree of Doctor of Medicine.

With the opening of the second session 120 students matriculated, and the Louisville Marine Hospital, founded in 1817, was affiliated with the Institute, and it was during the second session that Prof. Caldwell delivered the first clinical lectures in its wards.

The opening of the third session was an auspicious one, with an enrollment of 204. Dr. Daniel Drake, even then internationally known, was called from Cincinnati to accept the Professorship of Clinical Medicine and Pathological Anatomy, thus increasing the faculty to eight full Professors, and the Institute was in a flourishing condition, ranking third in number of students of the 24 Medical Schools in this country at that time.

In 1840 Dr. Samuel D. Gross, a graduate of Jefferson Medical College, was added to the faculty. He was the author of the first book in English on Pathological Anatomy, and later recognized as one of the foremost Surgeons in the world.

Largely the result of Dr. Caldwell's activity and advice, a Clinical Amphitheatre, the first one west of the Alleghenies, was constructed adjoining the Marine Hospital.

On April 23, 1846, the University of Louisville was founded with two departments, the Department of Medicine and the Department of Law. The Louisville Medical Institute constituted the Medical Department.

In 1850 the Kentucky School of Medicine was established by the joint efforts of several Louisville Physicians and the faculty of Transylvania. Six years later Transylvania Medical Department at Lexington, ceased operations, but its affiliate, the Kentucky School of Medicine continued at Louisville. In 1869 the Louisville Medical School was founded, and in 1874 the Hospital College of Medicine was opened in Louisville. The Medical Department of Kentucky University was established in 1898, but was amalgamated with the University of Louisville's School of Medicine in 1907. In this same year the Hospital College of Medicine joined with the Louisville Medical College. Finally, in 1908, the Kentucky School of Medicine, the lineal descendent of the Medical Department of Transylvania University, the Louisville Hospital College of Medicine and the University of Louisville united and formed the present University of Louisville, School of Medicine.

*References: A History of the Louisville Medical Institute and of the Establishment of the University of Louisville and Its School of Medicine, 1833-1846, by Emmet Field Horine, M. D. Read before the Filson Club, November 7, 1932. Reprinted from The Filson Club History Quarterly, July, 1933.

## REMINISCENCES OF THE UNIVERSITY OF LOUISVILLE

**Mrs. Hugh Nelson Leavell, Louisville.**

When Mrs. S. I. Kornhauser asked me to talk to you about the University of Louisville and some of the doctors whom I have known and loved, I thought, how nice, for I can tell all the interesting things I know about them. Those brave fine doctors, untiring in their devotion to duty, deserve more praise than I can give in twice the time allotted to me.

When I was a very little girl I heard from uncles, cousins and brothers of the University of Louisville Medical School. They had graduated there and in my opinion they were the finest doctors in the world—hence the University of Louisville was the finest of medical schools!

A few years later, I used to drive to the medical school with my brother, Dr. William L. Rodman, who was associated in surgery with Doctors David Yandell and W. O. Roberts. The school was on 8th and Chestnut, where the Board of Education now is and was just as imposing and gloomy then as it is now The professors of the school at that time were a galaxy of brilliant men—each standing out in his department as a star of the first magnitude. There were Doctors Yandell, Roberts, Bodine, Bailey and Cecil—too many to name—all of them were respected and loved. We were in an age when our great men were admired and respected instead of being torn off their pedestals to be dissected by irreverant minds and hands. I greatly deplore the present day tendency to rob

our great men of their greatness and to prove them only weak mortals after all. Why can we not value them for their worth-while accomplishments and not clutter our minds with their defects? Knowing the weaknesses and failures of others has never yet inspired one to great deeds! I am glad I was raised in an age of idealism and had for my motto for life, "The situation which has not its ideal was never yet occupied by man."

Ten Rodmans and five Leavell relatives have gone to the medical school of the University of Louisville. Jesse Rodman was in the first graduating class in 1838.

Follows the list of the members of my family who have graduated from the Medical Department of the University of Louisville:

| | Graduated |
|---|---|
| Jesse Rodman | 1838 |
| Hugh Rodman | 1842 |
| G. W. Rodman | 1847 |
| James Rodman | 1849 |
| W. S. Sneed | 1841 |
| Sam Rodman (Indiana) | 1866 |
| W. B. Rodman | 1870 |
| John J. Rodman | 1878 |
| Hilliary Rodman | 1879 |
| W. L. Rodman | 1889 |
| Benjamin Leavell (Miss.) | 1866 |
| Hugh Nelson Leavell | 1894 |
| George W. Leavell | 1911 |

Two of my sons, Hugh Rodman Leavell and John N. Leavell, took a part of their courses here.

Of the above, three became members of the faculty, my brother Dr. W. L. Rodman of Louisville and Philadelphia, my husband, Dr. H. N. Leavell, and my son, Dr. Hugh Rodman Leavell. For many years, my husband taught Materia Medica and Physiology. His hour was from eight to nine A. M., so you know what rushing breakfasts we had! He loved to teach and loved his boys and his namesakes scattered over the country today bear witness to the boys' affection for him. George Leavell went to China as a medical missionary where he is still working. My son, now Director of Health for the city, had the honor to be one of the faculty until recently.

The students called Dr. Yandell "The Grand Old Man." He was admired and respected by all of them and their greatest pride was to have his commendation. He was a brilliant surgeon, a polished gentleman, a scholar whose keen observations and wit showed his worldly wisdom.

Dr. Roberts was the best loved of all. His was a kindly, happy nature, ever ready with a joke and a smile but equally ready to help anyone in trouble—a truly great doctor and surgeon but an even greater man.

Dr. Bodine was the Dean. I was a little afraid of him because of his exalted office (I'm still afraid of Deans!) Drs. Bailey and Cecil were beloved family doctors of the highest type. They shared all our joys and sorrows, these family doctors, and were friends loyal and true.

It was a grief to me when instead of one medical school (the University of Louisville) we had four schools

| | Organized |
|---|---|
| The Louisville Medical Institute | 1837 |
| Kentucky School of Medicine | 1850 |
| Louisville Medical College | 1869 |
| The Hospital College of Medicine | 1873 |
| Medical Department of the University of Kentucky. | 1898 |

All with fine faculties and sending out men well equipped. But so many schools in one place could only cut each others throats. The competition was too keen. Standards were unconsciously lowered. Just about this time, a drive for more education, greater requirements and longer medical courses got under way. My brother, Dr. Rodman, now a surgeon in Philadelphia, was one of the leaders of this movement. On each visit home, he talked with the faculties of the several schools urging higher standards and requirements and a combination of the schools into one university. This was accomplished in 1908.

It was another step forward when this present location was acquired and the various schools of the University assembled in one place. The property had formerly been "the House of Reform." There was no softening of titles in those days. Bad boys and girls went there to be reformed and I regarded the place, and the boys and girls whom I saw through the cracks of a high picket fence, with about the same sensation as that with which I regarded the lions and tigers in a circus ! ! ! It was a relief to see the fence torn down and to know that the boys and girls were living where understanding people would endeavor to train and develop them into worth while men and women.

At first the grounds and buildings looked mighty desolate. I recall taking a young woman out Third Street for a drive. When we passed the University grounds, she said, waving her hand toward the buildings, "This is the University of Louisville! Isn't it pitiful?" It was, compared with the modern Western University from which she had recently graduated, but I never quite forgave her for saying it. However, with her speech, was born in me a loyalty to our University that I had never known before—a loyalty which has grown as those who are dear to me have been among the faculty.

As I see the improvements in the grounds and the new buildings, the greater the dignity our University is assuming, the greater my pride increases and I say with all of you, "Long live the University of Louisville."

## News From the Counties

(Delayed from April Issue)

### CALLOWAY

Mrs. Hugh Leavell Houston spent several days during February, with her husband, Dr. Houston, in Vanderbilt Hospital, Nashville, where Dr. Houston is under the care of Dr. Hollis Johnson. Dr. Houston is the son of Dr. and Mrs. E. B. Houston whom all Auxiliary members know and appreciate for their gracious hospitality during the Murray Meeting and for the splendid work of Mrs. Houston as our State President during 1930-1931.

### CAMPBELL-KENTON

We have enjoyed some very interesting meetings during the last few months in the Campbell-Kenton Auxiliary. Our October meeting was held at the charming home of Mrs. William Richard Miner, Arcadia Drive, Fort Mitchell, where, after the regular business session, we enjoyed delicious refreshments and a social hour for the discussion and exchange of vacation experiences. An interesting and informative talk on "Boarding Home Problems in Child Placing" by Miss Stella Gressle, Social Worker from Cincinnati, followed the regular business session in November. In December, Mrs. Don Griffin, a former missionary, entertained us with a description of "Christmas Customs in India" as she had known them there. At the business session, it was decided to donate baskets of food supplies to the orphanages as a part of our Christmas work.

In January, we sewed at St. Elizabeth's Hospital, following our business session, and completed 37 mattress covers, 36 baby blankets and 6 abdominal bands which we donated to the Maternity Ward.

There is a great deal of illness in the families of our physicians this winter. Dr. and Mrs. B. K. Menefee are both now convalescing from long and severe illnesses and we are happy to report that all of our other afflicted ones appear to be on the road to recovery, too.

### JEFFERSON

The Study Class is continuing its book reviews. The books selected are either written by physicians or about physicians. At the January meeting, Mrs. J. Paul Keith reviewed "Life Begins At Forty" by Walter Pitkin and Miss Grace Stroud reviewed "Awakening Japan" by Dr. Erwin Baelz. In February, Mrs. E. L. Pirkey, reviewed "The Great Doctors" by Henry Sigerest and in March, the review was given by Mrs. P. E. Blackerby. Her book was "The Joy of Living" by Franklin Martin. Mrs. L. Lyne Smith, our first vice-president, conducted the Current Events program at each meeting and Mrs. James D. Gibbs, the Chairman, presided.

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The Sewing Unit, with Mrs. S. C. McCoy acting as Chairman in the absence of Mrs. F. Parks Ogden, met in January at the home of Mrs. Thomas J. Crice, in February, with Mrs. Oliver P. Miller and in March, with Mrs. A. T. McCormack.

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A series of "Come-And-See-Trips" to the various agencies connected with the Louisville Community Chest was arranged for February and March, Mrs. A. T. McCormack, Chairman. The first trip of the series, February 21, included luncheon at the Salvation Army Citadel, a visit to the Salvation Army Social Service Center and Hotel for men; the City Hospital Social Service Center and Clinics; and a lecture demonstration at the Mental Hygiene Clinic. The next week, the Well-Baby Clinic at Wesley Community House and the Jewish Children's Home and Children's Convalescent Hospital were visited. On March 6, the trip included a visit to the Susan Speed Davis Home, an organization which has benefitted by the generosity of the Sewing Unit: then, a trip to a colored Well-Baby Clinic, concluding a full afternoon with a visit to the Kings' Daughters' Home for Incurables. The next week the Auxiliary will visit the Camp Taylor Health School, for tubercular children, where a health demonstration is to be given. The group is especially interested in this school as the Sewing Unit has made many garments for these unfortunate children. A model lunch, such as given these tubercular children, will be served, to the members of the Auxiliary. On March 21, the trip will be to the Executive Offices of the Community Chest where an explanation of the Chest and the work of its 36 member agencies will be given. Health demonstrations by both Boy Scouts and Girl Scouts will be presented, here, in their headquarters offices. Concluding the 6 week study, will be the visit to the Social Service Building where the work of the Family Service Organization, the Children's Agency and the Social Service Exchange are to be explained and demonstrations given by the Public Health Nursing Association.

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Mrs. F. Parks Ogden, Chairman of the Sewing Unit, has been visiting her daughter in Texas for several months.

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Dr. James S. Lutz and Mrs. Lutz have returned from a trip to Florida.

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A joyous Christmas gift, Mary Carol, arrived at the home of Dr. Frank J. Bohannon and Mrs. Bohannon on December 21, 1933. At the time of this writing, the young lady has doubled her original weight of 7 pounds, 8 ounces.

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Flags fluttered gaily on Washington's Birthday, February 22nd, as Dr. Vincent Stabile and Mrs. Stabile welcomed into their home two brand new Americans, twin daughters, Frances Louise ( 6 pounds, 7½ ounces) and Mary Ann

(5 pounds, 7 ounces). Congratulations, upon the arrival of these young patriots, are extended from all Auxiliary members. Dr. and Mrs. Stabile came to this country about three years ago from Alcamo, Sicily, where Mrs. Stabile's father is the famous physician, Cav. Dr. Gaspare Impellizzeri. (Cav.....Cavaliere is the Italian designation for the members of the order known as the Knights of the Crown of Italy.)

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Miss Sarah Isabel Sherwood, daughter of Dr. H. N. Sherwood and Mrs. Sherwood, was married in February to John Paul Keith, son of Dr. J. Paul Keith and Mrs. Keith.

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Mrs. George C. Leachman has returned from a visit with her aunt and niece in New Orleans. While there, she witnessed the Mardi Gras Carnival.

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Mrs. Arthur T. McCormack has returned from a visit at the home of her parents in New Hampshire.

### NELSON

Nelson County Auxiliary is collecting histories of the physicians of the past in this vicinity, the most interesting being that of Dr. Walter Brashear who performed the first amputation of the leg at the hip joint.

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Dr. R. H. Greenwell and Mrs. Greenwell and family attended the Mardi Gras festivities in New Orleans.

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Our Hygeia Chairman reports 4 subscriptions.

### PERRY

We are proudly displaying to all admiring friends our newly bound copy of the four issues of the 1933 Supplement, the Woman's Auxiliary Section of the Kentucky Medical Journal. It is bound in a cheerful red to match the gay coat of the Kentucky Cardinal as he greets us on the cover page of the January issue.

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It was voted to give the entire proceeds of the Silver Tea, $12.60, held at the home of Mrs. William L. Welch, to the Jane Todd Crawford Memorial Fund and the check was promptly sent to the State Treasurer, Mrs. Curt H. Krieger. A donation of $5.00 was also sent to Mrs. Peter Guntermann, Business Manager of the Quarterly Supplement, for the support of our publication. In February, we gave $2.00 in prizes to the rural schools for their work in the Tuberculosis Essay Contest. The Solar High School won and the Hardburly Grade School earned honorable mention.

## News From the Counties

### CAMPBELL-KENTON

Following the regular business meeting in March, the members of the Campbell-Kenton Auxiliary enjoyed a book review, "The Magnificent Obsession" by Lloyd Douglass, ably presented by Mrs. Irene Schaber.

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Mrs. Luther Bach entertained the Dayton Woman's Club at her home in Bellevue, May 14th, and presented a program on Social Hygiene.

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The Annual Banquet was held April 5th in Covington The newly elected officers are:

President—Mrs. Henry Clay White, Covington
1st Vice-President — Mrs. Irene Schaber, Dayton
2nd Vice-President—Mrs. Charles Baron
Secretary—Mrs. Luther Bach, Bellevue
Treasurer—Mrs. Clayton Whittimore Shaw, Alexandria

**Committees**

Historical Collection—Mrs. N. A. Jett, Mrs. J. H. Caldwell, Mrs. Eckler
Hygeia—Mrs. Luther Bach, Mrs. M. S. Jolson, Mrs. A. Metcalfe
Jane Todd Crawford—Mrs. N. A. Jett
Membership—Mrs. John Todd, Mrs. J. A. Caldwell, Mrs. S. G. Biltz
Program—Mrs. Charles Baron, Mrs. Irene Schaber, Mrs. J. D. Northcutt
Publicity—Miss Pauline Haley
Social—Mrs. W. R. Miner, Mrs. C. A. Menefee, Mrs. C. W. Shaw

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April 26, at a special meeting called at the Speers Memorial Hospital for sewing, 63 diapers were made for the Maternity Ward.

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Mrs. John Todd entertained the members on May 17th at her home in Newport. Following the business meeting, refreshments of ice cream, cake and coffee and a merry social hour were enjoyed.

### GRAVES

Some of our Auxiliary members are interested in the 2000 acre game reserve established in Graves County through the efforts of local citizens, including Dr. E. C. Walter, Mayfield. 35 landowners have pledged their acreage to the preservation of game and song birds for a period of 5 years and the State Game and Fish Commission have agreed to furnish eggs, birds and animals for breeding purposes.

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Members of the Auxiliary and their husbands have been saddened by the recent death, at her home in Farmington, of Mrs. Sophia Hendley, 78, widow of Dr. Benjamin Hendley and by the death, May 4th, of Dr. Edwin A. Stevens, 70, Mayfield, President of the Graves County Medical Society. Dr. Stevens had practiced medicine in Graves County for 49 years.

### HARLAN

Harlan County Auxiliary was reorganized at the home of Mrs. E. M. Howard, Harlan, on Thursday afternoon, May 31st by Mrs. W. M. Martin. Following the election of Officers, plans

were made and Committees appointed for the entertainment of the Annual State Meeting to be held in Harlan, October 1-4.

The following Officers were elected:

President—Mrs. W. M. Martin, Louellen
Vice-President—Mrs. Clark Bailey, Harlan
Secretary-Treasurer — Mrs. J. W. Nolan, Harlan

**Committee Chairmen**

Arrangements—Mrs. Clark Bailey
Credentials and Registration—Mrs. W. R. Parks
Reception—Mrs. M. L. Gunn
Information—Mrs. E. M. Howard
Transportation—Mrs. W. P. Cawood
Music—Mrs. W. E. Riley
Flowers—Mrs. E. W. Aiken
Luncheon—Mrs. S. H. Rowland
Golf—Mrs. P. O. Lewis
Publicity—Mrs. C. E. Abell.

## JEFFERSON

We have given our first style show. Quite a number of people have been kind enough to say it was a big success. Our models ranged from a three-year-old boy to a beautiful white haired matron and the gowns from street dresses to evening gowns and wedding dresses.

A wedding gown of 1879, belonging to her grandmother, was worn by our Secretary, Mrs. W. K. Kannard, and made a marked contrast with the 1933 model worn by one of our newer members, Mrs. J. Murray Kinsman.

The following were the models—Mesdames Garrett Wilson, W. B. Troutman, J. Duffy Hancock, Charles Roser, Jr., J. D. Belton, P. E. Blackerby, M. H. Mathewsian, W. Kenneth Kannard, E. H. Koch, R. C. Adams, J. Murray Kinsman, Joseph F. Dusch, R. Douglas Sanders, Oliver H. Kelsall, Curt H. Krieger, J. Hunter Peak and C. G. Arnold.

Misses Ann Fallis, Martha Jean Leachman, Mary Edward Miller, and Madeline Miller.

Masters Henry C. Herrmann, Jr., Evan Overstreet, and Robert Overstreet.

Mrs. Richard T. Hudson and Mrs. John L. Jones were in charge of the arrangements and were assisted by the following committees.

The reception committee was composed of the officers of the Auxiliary and the new officers who will be installed in June. These were Mesdames J. Hunter Peak, Oliver H. Kelsall, M. H. Mathewsian, W. Kenneth Kannard, Curt H. Krieger, William A. Jenkins, S. C. McCoy, J. Paul Keith, R. C. Adams, Richard T. Hudson and Miss Grace Stroud.

Mrs. Irvin Abell and Mrs. George A. Hendon poured tea. Music was furnished by Mrs. William R. Pryor. Mrs. E. H. Koch and Mrs. R. C. Adams had charge of the decorations. Mrs. W. Kenneth Kannard and Mrs. Charles Roser, Jr., served as the Invitation Committee. Miss Grace Stroud had charge of the publicity and was assisted by Mrs. Arch Herzer and Mrs. Joseph C. Ray.

The receiving line was composed of the president, Mrs. J. Duffy Hancock, the president-elect, Mrs. L. Lyne Smith, and the past presidents of the Auxiliary. These included Mesdames James D. Gibbs, Hugh N. Leavell, George A. Hendon, D. A. Bates, John K. Freeman, C. G. Arnold and William E. Fallis. The past presidents of the State Auxiliary, who reside in Louisville, were included also. They were Mrs. Arthur T. McCormack and Mrs. P. E. Blackerby. Mrs. Hendon, of course, took her place with the past presidents of Jefferson County.

Among our guests were the President of the Woman's Auxiliary to the Kentucky State Medical Society, Mrs. B. K. Menefee, of Covington.

The President-Elect of the Woman's Auxiliary to the Kentucky State Medical Society, Mrs. J. I. Greenwell, of New Haven.

Mesdames Holman McCawley, Laura Summers, E. D. Mudd and A. D. Steely, all of Bardstown.

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Miss Carolyn Crice, daughter of Dr. and Mrs. Thomas J. Crice, was married to Mr. Bernard J. Bloemer on June 7 at St. Agnes Church.

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At the regular quarterly luncheon meeting in March, Mrs. L. Lyne Smith was elected President and will take office in June. The other newly elected officers are as follows:

1st Vice-President, Mrs. S. C. McCoy
2nd Vice-President, Mrs. Curt Krieger
3rd Vice-President, Mrs. J. Paul Keith
4th Vice-President, Mrs. R. C. Adams
Secretary—Mrs. Richard T. Hudson
Treasurer—Miss Grace Stroud
Parliamentarian—Mrs. William A. Jenkins

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The Study Class, under the leadership of Mrs. James D. Gibbs, meets every month at the Brown Hotel in Louisville. In April the book review was given by the secretary of the Auxiliary, Mrs. W. Kenneth Kannard, and was "Napoleon in Exile" by Barry E. O'Meara. An original paper entitled "Peace as Seen by the Women of the East" was read by Mrs. S. S. Jenkins. Mrs. L. Lyne Smith gave a current events program. In May, Mrs. John K. Freeman reviewed "Crowded Hours" by Alice Roosevelt Longworth. This deviation from our usual reviews of books written by doctors was more of a current events subject as Mrs. Longworth's book links Theodore Roosevelt with the present occupant of the White House.

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The Sewing Unit met with its chairman, Mrs. F. Parks Ogden, in April. The unit worked on hospital supplies that month but in May, the chairman bought its own material and made children's clothes, which will be given to charity.

Our president, Mrs. J. Duffy Hancock, was hostess to the group in May.

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Dr. John L. Jones, who was with the State Board of Health, has been transferred to Salt Lake City, Utah, and our Auxiliary has lost an energetic and willing worker in Mrs. Jones. She was chairman of the telephone committee and did splendid work and will be greatly missed by the Auxiliary.

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Several of our members have been ill this spring but all are convalescent now. Included in this number are Mrs. Irvin Abell, Mrs. Sam Bumgardner, Mrs. Eugene Kremer, Jr., Mrs. William E. Fallis, and Miss Mary Leachman, daughter of Dr. and Mrs. George C. Leachman.

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Mrs. George A. Hendon accompanied Dr. Hendon to a medical meeting at Natchez, Mississippi. during the month of May.

### MARSHALL

At the March meeting of the Marshall County Auxiliary, the following officers were elected:

President—Mrs. W. S. Stone, Benton
Vice-President—Mrs. S. L. Henson, Benton
Secretary-Treasurer—Mrs. W. T. Little, Calvert City
Historian—Mrs. V. A. Stilley, Benton

This is the first time in the history of the organization that the President of the Auxiliary has been the wife of the President of the Medical Society. We expect great progress in Marshall this year.

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Dr. W. T. Little and Mrs. Little, Calvert City, attended the Annual Conference of the National Tuberculosis Association held in Cincinnati, in May.

### MERCER

Mercer County makes its debut in this column in the July issue, for this organization, the Woman's Auxiliary to the Mercer County Medical Society, was organized in the Gallery of the Confederacy at the Mansion, near the entrance to Pioneer Memorial Park, on Thursday afternoon, May 31st by Mrs. A. T. McCormack. The following officers were elected:

President—Mrs. Thomas Meredith, Burgin
1st Vice-President—Miss Gladys Seay, Salvisa
2nd Vice-President—Mrs. Thomas Price, Harrodsburg
Secretary—Mrs. J. R. Robards, Harrodsburg
Treasurer—Mrs. Condit Van Arsdale, Harrodsburg

Other members present were: Mrs. E. V. Seay, Salvisa; Mrs. Thomas Meredith, Mrs. Glave Goddard, Mrs. Clell Coleman, Mrs. Lafon Riker, all of Harrodsburg.

Regular meetings are planned for the third Monday of each month.

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Another new Auxiliary was organized at the Nurses Home of the Community Hospital, Glasgow on Tuesday afternoon of June 5th, by Mrs. B. K. Menefee who, with Dr. Menefee drove from her home in Covington for this meeting. The following officers were elected:

President—Mrs. Robert Joseph Hansel, Mammoth Cave
Vice-President—Mrs. Ernest Arthur Barnes, Albany
Secretary-Treasurer—Mrs. Caswell C. Turner, Glasgow

Other members are: Mrs. Sam Stephenson, Albany; Mrs. George Eagle Bushong, Tompkinsville; Miss Corinne Bushong, Tompkinsville; Mrs. George W. Bushong, Tompkinsville; Mrs. Herschel Biggerstaff Ray, Tompkinsville; Mrs. Carl Clifford Howard, Glasgow and Miss Lydia M. Haase, Glasgow.

Regular meetings are scheduled for the first Tuesday of the month.

Following the organization meeting, delightful refreshments, fruit punch and cakes, were served by Miss Haase, assisted by Mrs. Howard and Mrs. Barnes.

Five members of the Nelson County Auxiliary, led by Mrs. J. I. Greenwell, New Haven, County President and State President-Elect, drove over for the meeting, with Hugh Greenwell as chauffer. The party included: Mrs. E. D. Mudd, New Haven; Mrs. Laura B. Summers, Mrs. A. D. Steely and Mrs. Von Pritchett of Bardstown. Mrs. A. T. McCormack, Louisville, guest of Dr. B. K. Menefee and Mrs. Menefee, Covington, also attended the meeting.

### PERRY

At the March meeting of the Perry County Auxiliary, Dr. R. L. Collins, Hazard, reported the progress being made in the State-wide campaign for making all of the beds at Hazelwood, free beds.

At the April meeting the following officers were elected:

President—Mrs. Hunter W. Gingles, Hardburly
1st Vice-President—Mrs. J. P. Boggs, Hazard
2nd Vice-President—Mrs. P. L. Johnson, Hazard
3rd Vice-President—Mrs. Joseph Manuel Ray, Allais
Secretary and Treasurer—Mrs. A. M. Gross, Hazard
Corresponding Secretary—Mrs. F. F. Shelton, Hazard

**Committee Chairmen, appointed** (all of Hazard)

Devotional—Mrs. J. P. Boggs
Hygeia—Mrs. R. L. Goad
Jane Todd Crawford Memorial—Mrs. W. L. Welch
Public Relations—Mrs. James C. Hagan
Publicity—Mrs. S. B. Snyder
Tuberculosis—Mrs. D. L. Combs

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## CHATTING

(Continued from Page 74)

Edith: "Good. Girls, make me a list of these ideal places and I'll come over and telephone in the morning."

Mary: (smiling happily): "List, nothing. Your Auxiliary Shopping Guide in the back of your Quarterly will tell all."

Edith: "That's so. See you all, later. I'm so happy." And Edith sped light-heartedly across the lawn to her new home.

Anna: "I must away. Am attending Mary Martin's funeral at Cralle's. That is one funeral home which relieves the family of saddening details. Good-bye 'till tomorrow."

The guests duly waved away, Mary resumed the discussion of the new neighbors.

Mary: "Edith's doctor administered Gilliland's Diphtheria Toxoid to her four children before they even started getting ready to move—No fear of Diphtheria in that happy home."

Ella: "Clever, conscientious mother. And wise doctor!"

Mary: "Oh Ella, Edith must see our beautifully bound Quarterlies. The Gibbs-Inman Company do such satisfactory work."

Ella: "Make an announcement of the Montgomery arival to go into the July Quarterly. It's nearly time to be sending the material to The Times-Journal Publishing Company."

Mary (pretending to shiver and to warm her hands before an imaginary fire): "Can't you just see Stearn's Coal glowing merrily in those huge fireplaces in Edith's living-room and library?"

Ella: "Yes. And I can also see Edith going into ecstasies over the scenic effects at sunset when I drive her over the K. and I. Bridge."

Mary "And those red roses at the Bridge will be in bloom soon, too."

Ella: "How Edith will enjoy driving with me to Bardstown to visit The Federal Hill Art and Gift Shop. Edith may need some gifts to send to her old home-towners." Much laughter at this bright thought.

Mary: "Alice intends to have the Montgomerys visit Denunzio, Maloney-Davidson, Louisville Grocery Company and Sanders to convince the newcomers that this town goes in for Fruitology and Chickenology in a Big Way."

Ella (warming up to the hurrah stage): "Edith makes designs for book-plates, too, and Susie will just naturally direct her to Bush-Krebs for the cuts."

Mary: "Can't you just see Dr. Montgomery losing himself in Theodore Tafel's while he fits up his office with perfect new equipment?"

Ella: "Mary, my dear, 'an orchid to you' for thinking up this perfectly good scheme for keeping the Montgomerys safe and snug in Louisville."

Mary: "It will have to be an orchid from Haupt's then." How they laughed, these two, so full of joy and good-will were they.

Ella had left. Now as usual she had to come running back for a last remark. Mary must be sure to bring Edith to the Card Party, The Study Club, to the Luncheon and to the Picnic and next fall to the Sewing Unit, with tears dried and a song in her heart.

To all of which Mary replied: "I can hear Edith singing now, and, as for the tears, why the very thought and sight of our Auxiliary Shopping Guide dried those tears, forever and a day."

## "LIFE BEGINS AT FORTY"

(Continued from Page 72)

work, among whom we note our own Honorary member, Mrs. Ruby Laffoon, Frankfort, who was then Treasurer. Also, Mrs. W. T. Lafferty, Lexington, 1st Vice President, and Mrs. Cora Wilson Stewart, Frankfort, 4th Vice President, now living in Washington, D. C. There were 19 Department Chairmen, including: Health, Pure Food, Moral Sanitation (we now term this work Social Hygiene!) Conservation, Forestry and Home Economics. The membership was composed of 24, 230 members in 167 clubs in 72 Counties.

Auxiliary members will find the following extracts of interest as they relate to Child Welfare and to other Health work. Surprisingly few differences are noted in the problems and the methods of approach as compared with today. Why is real progress so slow? Is it needlessly slow? Are we the cause of the slowness?

From Kentucky Woman's Journal, Vol. I, No 1.,Page 23, November, 1915. (First Issue) Extract from:
"Why Scott County Has A Health Superintendent" By Mrs. W. H. Coffman, Georgetown.

"On October 14th (1915) the Health Committee of the Civic League expects to hold, under Miss Hunt's direction, a Better Baby Contest and Health Exhibit, open to babies all over the County." (Miss Elizabeth Hunt, a trained nurse and social worker of Cincinnati, began her work in Scott County, July 1, 1915.)

******

From Kentucky Woman's Journal, December, 1915, Vol. I, No. 2, p. 2.
"The President's Letter."—Extract
(Mrs. Morris Bartlett, Lawrenceburg, President)

"For Health, we stand with the State Medical Association in its endeavors to have in each County an All-Time Health Officer (salaried physician who will give his entire time to a survey and remedial suggestions in every community) and to render all the assistance possible in the crusade for the prevention of blindess."

## PUBLIC HEALTH IN KENTUCKY

Mrs. Lafon Riker, Chairman

(From Kentucky Woman's Journal, December, 1915, Vol. I, No. 2, p. 14.)

"The Health Department wishes to call the special attention of the club women of Kentucky to the line of work to be followed this winter. First, as has been our custom in past years, we ask co-operation with the Tuberculosis Commission in the sale of Red Cross Seals. The per cent allowed us this year is more liberal than usual,

25 per cent where there is no local organization, and 90 per cent to Health Leagues.

"Let us take up this work with a new enthusiasm, for the call is just as urgent as in former years, and money is needed to keep up the fight against the Great White Plague.

"Then the Children's Bureau is asking two things of us—a Baby Week, to be held in March, and a continuance of our work for Vital Statistics. Do not wait for a letter in regard to Baby Week, but write to Washington and the plan in detail will be sent to you. If you have not taken up the work of Birth Registration in your community, do it at once. The Children's Bureau will also furnish detail information for this.

"This is legislative year, and we will concentrate on two bills—the All-Time Health Officer Bill and the one for examination for sight and hearing by teachers of school children. Inform yourselves in regard to these bills and work for them through your local legislators.

"We are using our Journal this year to present department work to the club, thus saving money and time in avoiding a multiplicity of letters. Therefore, let me beg of you to keep these most important matters in mind and act at once.

"The article which follows, (by Dr. A. T. McCormack, Secretary, State Board of Health), is, we believe, timely, serving to emphasize one of the lines of action at hand for the clubs. The Christmas Seals must now be sold to aid in the fight against tuberculosis.

"We thank you, one and all for faithful and efficient work in the past and are looking forward to a successful year's work."

*********

THE SITUATION IN KENTUCKY

" 'It is not generally known, but it is a fact, that tuberculosis, or consumption, as it is generally called, is the greatest health problem in Kentucky, and affects more seriously the happiness and welfare of the State than all of the other contagious and communicable diseases combined.

" 'Statistics from the State Board of Health show that more people die every year from tuberculosis in its various forms within the State than from typhoid fever, diphtheria, measles, scarlet fever, whooping cough, influenza, hookworm, trachoma, pellagra, and all of the murders and suicides thrown in.

" 'Between 5,000 and 6,000 of our population die annually from consumption, while 30,000 more are affected with the disease, and usually pass away from within five to ten years, if not cared for. Kentucky stands third among the States of the Union in the proportion of deaths per hundred thousand from tuberculosis; the last figures given by the United States Census showed 360 deaths per 100,000, while many of the other States ran below 100 deaths per 100,000 population.

" 'Ignorance among the people in regard to the causation and prevention of the Great White Plague is one of the principal causes of its prevalency in the State, and it was for the purpose of spreading information throughout the State in regard to the cause and prevention of the disease that the State Tuberculosis Commission was legislated into existence.

" 'It is with humiliation and shame that Kentucky has been shown by the United States Census of 1910 to possess a larger number of native white illiterates than any other State in the Union, regardless of size of population, which in a manner accounts for the widespread condition of tuberculosis in the State.

" 'When we consider the value of the lives lost through consumption, the figures are astounding, for they easily run into the hundreds of millions of dollars. The actuaries of the principal life insurance companies of the country place the labor of an able-bodied person at $40,000 from twenty to sixty years of age. Estimating that the 6,000 consumptives who die at an age of thirty-five years, the State sustains an annual loss of $150,000,000 through their death alone.

" 'This does not include the cost of the orphans left as charges on the State; nor the sorrow and human suffering endured by those who pass away, or the members of the family left behind to mourn their loss.

" 'If Kentucky stock-raisers would lose as many horses, cattle and hogs from an epidemic as the State loses annually through tuberculosis, a war cry would be raised among the farmers which could be heard from the heart of the famous Blue Grass region to the National Capitol at Washington City.

" 'The medical profession has proven that tuberculosis results from a specific germ or microorganism and is preventable, with proper sanitary care. A generation ago a few people knew that tuberculosis, scrofula, white swelling and Potts' disease were but different manifestations of the same disease. In 1880 Dr. Koch, of Berlin, one of the greatest benefactors the world has ever known, proved that all of these conditions resulted from the same tubercular germ.

" 'Since the days of Koch the scientific world has endeavored to fight the Great White Plague through associations, societies, laws, city ordinances and sanitoria, with great success. Many of the States are expending $2,000,000 to $5,000,000 annually, on the construction of sanitoria, colonies, school inspections, etc. And, in proportion to the money expended, results in the suppression of the disease are obtained.

" 'In 1912 the legislative body of the State of Kentucky realized that it was necessary to pass a law for the suppression and control of the disease, as a result of which the Kentucky Tuberculosis Commission was created. The law provides the following activities as the proper work of the Commission:

" 'The study of tuberculosis in all its forms and relations; the dissemination of information with reference to its cause, care, and prevention; co-operation with public health authorities of the State and local boards of health, the National Association for the Study and Prevention of Tuberculosis, medical societies, etc.; provision for the establishment ****** of dispensaries, clinics, etc.

" 'With the exception of Waverly Hills, Hazelwood and the Paducah hospital, which contain provision for but 210 patients, there are no institutions in the State for the treatment of consumption. Kentucky should provide two State institutions, one for white and one for colored, capable of caring for 500 cases each. Young men and women suffering from the disease in its incipient form should be sent to such institutions where their lives could be spared, if taken in time. Besides, these young people could be given the benefits of an industrial education at such institutions during their convalescence, which would enable them to become more useful citizens on their return home.

" 'The Secretary is anxious to have the Legislature at its next session pass a bill enlarging the scope of the present tuberculosis bill.

" 'We desire two State institutions for incipient cases, one for the white and one for the colored.

" 'A law requiring compulsory registration and segregation of the advanced cases.

" 'School inspection.

****** a subsidy from the State.

" 'General laws regulating the control of those affected with the disease, in order to suppress the further infection in the State.' "

(Ed. Note. And this was published in 1915!)

## COME—AND—SEE—TRIPS IN LOUISVILLE

**Mrs. A. T. McCormack, Chairman**

For the purpose of acquainting members of the Jefferson County Auxiliary with some of our civic problems and with the work of the agencies composing the Louisville Community Chest, a series of 6 programs of visitation and demonstration, one each week during the Lenten Season, was arranged under the leadership of Mrs. R. S. Witherspoon, Secretary of the Community Chest Speakers Bureau. Although an all round presentation of the work of each agency was desired, emphasis on the medical and health services was stressed in order that members might gain a clearer vision of what the medical, dental and nursing professions are doing for the community, and for the individual, service through these agencies.

When the program was completed, a copy, together with a letter of announcement from the Chairman, was mailed by Mrs. Witherspoon, who acted as Secretary, to every member of the Woman's Auxiliary to the Jefferson County Medical Society. This was accompanied, also, by a return postal card, addressed to Mrs. Witherspoon so that the member could easily indicate whether or not she wished to join the Come-And-See-Trips.

Weekly reminders of the date and hour of the Trips were sent to all who showed interest, by Mrs. Witherspoon, who used both the telephone and post card mediums of communication.

Attendance fluctuated—due partly to weather conditions and partly to conflicting engagements, most noticeable, perhaps, being the conflict with the Birthday Party at the Woman's Club on March 21st.

15 of the 36 agencies of the Community Chest were visited as well as the Extension Office of the C. C., the City Hospital and the Salvation Army Hotel. 41 members with 3 friends visited one or more of these agencies with the group.

Transportation was graciously furnished by some of the members from distant parts of the city, who drove their own cars, while others depended upon the street cars.

Following is the program as conducted by Mrs. Witherspoon who was usually the first one present.

**Wednesday, February 21**

12:00 Noon Salvation Army Citadel
216 West Chestnut Street
Hosts
Mrs. Harry H. Bayes, wife of Divisional Commander
Ensign Ethel Graves
Captain Robert Rose
Mr. Smith T. Bailey, Vice-Chairman, Louisville Advisory Board.

Present (15 members)

Adams, Mrs. R. C.
Baker, Mrs. M. C.
Blackerby, P. E.
Davidson, Mrs. H. A.
Dougherty, Mrs. F. J.
Fitzpatrick, Mrs. J. W.
Hancock, Mrs. J. Duffy
Palmer, Mrs. E. R.
Hume, Mrs. Walter I.
Keaney, Mrs. John M.
Keith, Mrs. D. Y.
McCormack, Mrs. A. T.
McCoy, Mrs. S. C.
Moore, Mrs. Chas.
Rogers, Mrs. John C.

**Demonstration**

Luncheon, 15c. The same luncheon as furnished free of cost to applicants. (Vegetable soup, crackers, bread, apple butter, coffee.)

Brief outline of history, purpose and procedure of organization.

Inspection tour through building. Here, religious services are held: women and children housed and fed.

1:00 P. M. Salvation Army Social Service Center and Hotel (not an agency).
330 East Chestnut Street
Host
Major William Range

Present (14 members)
Group listed above, except Mrs. Blackerby*

**Demonstration**

Brief statement: Self supporting hotel for men. (Community Chest directs homeless men here).

Inspection tour of living accommodations for men and of Salvage Plant where waste is received from collecting carts, sorted, and converted into useful articles. Also, inspected Store where salvaged articles are sold at amazingly low prices.

"The Salvation Army is a religious body which has an important social work program, a program, however, which is fundamentally spiritual in its aim."

1:30 P. M. City Hospital Social Service
323 East Chestnut Street
Hosts
Miss Pauline Parr, Director
Mrs. Marion Beard, Assistant Director
Present (15 members)

Group listed above with addition of Mrs. Sidney J. Meyers.

**Demonstration**

Brief statement of purpose and method of service with anecdote illustrations.

Bird's-eye-view inspection tour of Clinics with demonstration at Prenatal Clinic of preparations suggested at homes for birth.

2:30 P. M. Mental Hygiene Clinic
610 South Floyd Street
Hosts
Miss Ruth Mellor, Executive Director
Miss Genette Ulvin, Psychologist
Present (13 members)

Group listed above except Mrs. Hancock* and Mrs. Hume.*

**Demonstration**

Mental Test with special stress on work with children.

Description, followed by informal discussion, of purpose, functions and methods of Clinic.

**Wednesday, February 28**

2:00 P. M. Wesley Community House
805 East Washington Street
Hosts
Miss Ellen Gainey, Head Worksr
Dr. Margaret Hatfield, Clinic Physician
Mrs. Pearl Schlosser, Supervising Nurse
Mrs. Clara Rankin, Nurse
Miss Margaret Robinson, Nurse
Present (5 members)

Blackerby, Mrs. P. E.
Hancock, Mrs. J. Duffy
McCormack, Mrs. A. T.
Rogers, Mrs. John C.
Stroud, Miss Grace

*Left for previous engagement.

(CONTINUED IN NEXT ISSUE)

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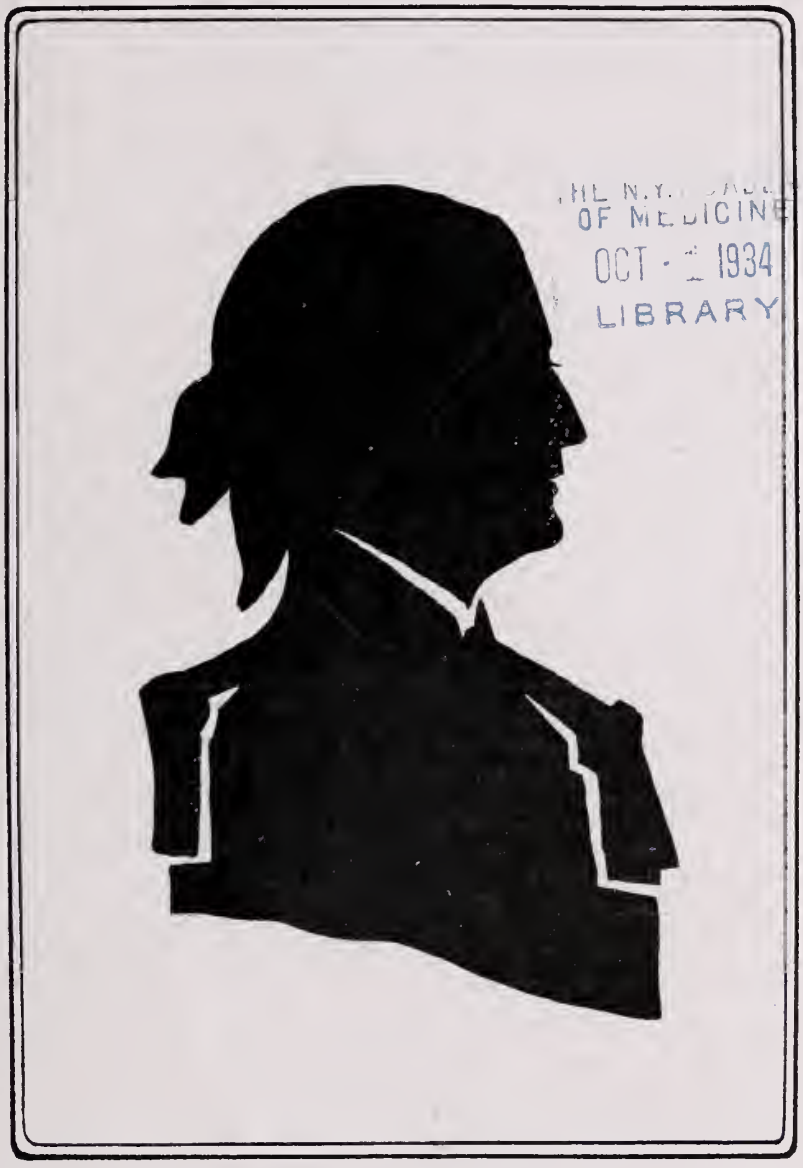
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## 1933-1934

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Legislation—Mrs. L. L. Washburn, Benton.

Organization—Mrs. C. A. Menefee, 302 Earl Avenue, Covington.

Public Instruction—Mrs. E. B. Houston, Murray.

Public Relations—Mrs. C. H. Jones, Lynn Grove.

Tuberculosis—Mrs. Lucius E. Smith, 439 Fairlawn Road, Louisville.

Historian—Mrs. V. A. Stilley, Benton.

## COUNTY MEDICAL AUXILIARIES

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Secretary-Treasurer—Miss Beatrice Harper, Lovelaceville

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### WOMAN'S AUXILIARY SECTION OF THE KENTUCKY MEDICAL JOURNAL

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WOMAN'S AUXILIARY SECTION

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## GOLF AT HARLAN

A promise of much joy to the golfers who attend the Annual Meeting at Harlan, comes from Mrs. W. M. Martin, who announces that a generous fund to provide trophies has been donated by the Harlan County Coal Operators. The Auxiliary Program has designated Thursday, October 4, and Friday, October 5, as the play time for their meeting. All the official meetings and other entertainment, Lunches, Teas, Drives, etc., are scheduled for the first three days, Monday, October 1-3, leaving two full days for play after the work is done.

## THE PRESIDENT'S MESSAGE

**Mrs. B. K. Menefee, Covington.**

When this copy of the "Woman's Auxiliary Section" reaches you, I will have just finished my year as your President. It has been an honor to serve in this capacity. I thank each of you for the help and encouragement you have generously given me.

We have three more County Auxiliaries at work this year and quite a bit of interest is manifested in several other Counties. Our Child Health and Welfare work has shown progress and our older activities have shown improvment. Archives, History Collection and the Jane Todd Crawford Memorial projects need more attention and these Chairmen will appreciate your interest.

Many letters of commendation concerning our publication, "The Woman's Auxiliary Section of the Kentucky Medical Journal," have reached me from other States. I urge you to help our Editor carry on this fine piece of work. Not one dollar has been taken from our Treasury for this project. Except for a small number of donations, all the expenses incurred for this project are defrayed by the advertisements secured by a few of our zealous members. The gracious privilege of publishing this Supplement to the Journal was generously given to us by the State Medical Association. Let us show our appreciation by making the most of it. Have you secured an Ad? Or, made a donation? Join us now. Help make a success of this venture.

A new project is before us. The old time "Doctor's Shop," recently acquired and dedicated with fitting ceremonies by the Kentucky State Medical Association at Memorial State Park in Harrodsburg, is to be furnished and equipped. The officers of the State Medical Association have asked us to help them collect, and select, these furnishings.

In this as in other projects I am hoping you will give your hearty cooperation and earnest support to our new President, Mrs. J. I. Greenwell.

## A WORD FROM MRS. J. I. GREENWELL

As this issue goes to press, we are all busily preparing for the Annual Meeting where, once a year, the majority of us have the privileged joy of renewing old friendships and starting new ones—the adornment of our practical work in the development and management of the Woman's Auxiliary to the Kentucky State Medical Association.

For me, this is a memorable preparation for a note-worthy occasion. For, at this time comes the responsibility of assuming leadership as your chosen Presiding Officer of the best organization to which any woman belongs. This honor, I esteem the highest and most precious honor that has ever been conferred upon me. That I may prove equal to this trust bestowed upon me is my fervent prayer.

# -:- EDITORIALS -:-

## FOR YOU IN THIS ISSUE

The Constitution and By-Laws of the Woman's Auxiliary to the Kentucky State Medical Association is re-published in this issue. New members will please see pages 102-103.

Every member is urged to study carefully the financial report of our organization, particularly the report of the Business Manager of our Quarterly Supplement to the Kentucky Medical Journal. These reports, submitted by Mrs. Curt H. Krieger, Treasurer of the Woman's Auxiliary to the Kentucky State Medical Association, and Mrs. Peter Guntermann, Business manager of the Woman's Auxiliary Section of the Kentucky Medical Journal, have been properly audited and will be found complete to July 31st in this issue, beginning on page 108.

Every member, too, will be interested in the new County Directory found on pages 113-116. Is your name and address correct? If not, please notify the Editor as well as your own County Secretary.

## THE FIRST PHYSICIAN IN KENTUCKY

The first physician in Kentucky, Dr. Thomas Walker, born January 25, 1715, in King and Queen County, Virginia, was the son of Thomas Walker whose family came from Staffordshire, England, and settled in the tide-water section of Virginia in 1650. Glouster County, in 1662, was represented in the Colonial Assembly by the elder Thomas Walker.

Dr. Thomas Walker was a member of the House of Burgesses and the Committee of Safety. He explored Kentucky before any other white man and he was the first white man to build a house in what is now the State of Kentucky. It was a log cabin located on a spot about 5 miles from what is now the city of Barbourville in Knox County. A reproduction erected by the Barbourville Post of the American Legion now marks the original site. Dr. Walker was made Commissary (quartermaster general) with the rank of Major in the Virginia troops which accompanied General Braddock in his disastrous campaign against the French and Indians in 1755.

Dr. Walker married Mrs. Mildred Thornton Meriwether, a second cousin of George Washington, and the widow of Nicholas Meriwether, in 1741, when Dr. Walker was 26 years of age. She was several years older than he and brought to him a landed estate of 1500 acres in Albemarle County, Virginia where, at their home "Castle Hill," their 12 children were all born. Mrs. Walker died November 16, 1778. Dr. Walker, later, married Elizabeth (Betty) Thornton, a cousin of his first wife. No children were born of this marriage.

Dr. Walker was the intimate friend of Peter Jefferson, as well as his physician. During "—June, July and August 1757 he made oft-repeated visits to Colonel Peter Jefferson, and stood by his bedside when he died on the 17th of August in that year." Dr. Walker was made the executor of the estate of Peter Jefferson and guardian of his son Thomas, who became the Author of the Declaration of Independance and the Fourth President of the United States.

A son, Colonel John Walker, was Aide-de-Camp to General Washington and, later, was elected as Senator from Virginia and another son, Reuben, was elected Representative to the Congress of the United States.

The descendants of Dr. Walker are numerous, many of them living in far distant lands. Dr. Walker lived at Castle Hill during his declining years, "cheered by the happiness and prosperity of his many children" and died near the end of his eightieth year, on the 9th of November, 1794.

## OF INTEREST TO ALL

Auxiliary readers will find the September issue of the Kentucky Medical Journal filled with much interesting reading, some of it beyond our ready comprehension from a scientific standpoint, to be sure, but—frequent use of the medical dictionary is helpful! Non-technical and inviting is the well-illustrated description of the aims and possibilities of the next Annual Meeting and of the mountain country, particularly around Harlan, beginning with the first Editorial. Reading this is good preparation for a successful and enjoyable convention for Auxiliary members, too.

And—of truly historic importance is the gripping story of the birth and of the first two months of life of the celebrated Dionne Quintuplets as told by the attending physician, Dr. Allan Roy Dafoe, Callander, Ontario, on pages 673-677, The Journal of the American Medical Association, September 1st issue. In its directness, simplicity and scientific consideration, it is comparable to Ephraim McDowell's remarkable report of the first ovariotomy.

## MISSED

One of the best loved and most helpful friends at the Annual State Meetings, Dr. John Gilmore Owsley, will be with us no more. Very quietly, he passed from us and into the Great Beyond on June 23, 1934. We shall miss him, always at the State Meetings, where, with effectiveness but with unobtrusiveness, he seemed indispensible in the quiet performance of the thousand and one little acts not listed in print on the program, such as constant attendance to the lighting, ventilation, seating, needs of the Presiding Officer, door-keeping, etc., all so nec-

essary to the efficient, smooth and comfortable conduct of a meeting, yet unrecognized, or little heeded, by the majority until personally inconvenienced. Humbly, yet with dignity, wearing his self-chosen livery of blue and gold as the Sergeant-At-Arms of the Kentucky State Medical Association, Dr. Owsley honored the menial tasks of the Medical Meeting. And, he never failed to offer his services to the Woman's Auxiliary in the conduct of their meetings. We shall miss his courtesy and chivalry who seemed, most of any we have known, perhaps, to personify that song of King David, the Psalmist:

"I had rather be a door-keeper in the House of my God, than to dwell in the tents of wickedness."

## THE LIVING HONORED

The Woman's Auxiliary is a connecting link between the medical profession and the lay public—its non-technical listening post, sometimes, its non-technical mouthpiece. One of the Auxiliary's chief aims is to secure recognition, by the general public, for the invaluable services rendered by the profession under all circumstances to humanity.

Too often these services appear to be taken for granted and are soon forgotten by the recipients. Oftentimes they are rendered without even acknowledgement—much less remuneration!—to the physician, who not only gave his knowledge, skill, time and energy but frequently forfeited his sleep, meals and other physical needs in order that he might best serve the patient.

Gratitude has, epigramatically, been defined as "a lively sense of favors to come." It has also been defined as "a fruit of great cultivation; you do not find it among gross people." The latter definition appeals more to our sensibilities. Every expression of gratitude, every recognition, anywhere, given to the medical profession for its unselfish effort toward the achievement of a better civilization, warms the hearts of Auxiliary members everywhere.

Auxiliary radio listeners, all over the country, rejoiced in the program of homage, and the acknowledgement of humanitarian service, paid American Medicine on August 28, 1934, when the American Legion bestowed citations for "true patriotism and good citizenship" upon two of its outstanding representatives. These were the Brothers Mayo, Dr. William James and Dr. Charles Horace—Physicians, Surgeons, Medical Statesmen.

At this public ceremony in Rochester, Minnesota, sponsored by the Local Post of the American Legion, the National Commander, Edward A. Hays, addressed 20,000 guests who had come from far and near, representing all walks in life. He commended the Mayo brothers not only for their war record but also for the many valuable community and National services they have rendered in times of peace and proudly stated that both were instrumental in the organization of the American Legion and that both are still active in the Local Post which they helped to organize.

The guest of honor was the President of the United States, who, in glowing terms, praised the humane, unselfish and constructive service of these two praiseworthy citizens to whom he referred in neighborly fashion as "Dr. Will and Dr. Charley."

Two tiny Mayo grandchildren unveiled the memorial plaque.

Rarely experienced, but exceedingly gratifying, is such recognition of good work well-done while the Do-ers are still living and able to appreciate the value placed upon their efforts by their colleagues and contemporary citizens.

Here was National recognition of medical service, the type that Auxiliary members realize has long been merited by outstanding physicians in most communities in every State. This National recognition of the Mayos will enhance the appreciation of medical service everywhere.

## TO YOU FROM SALT LAKE CITY, UTAH

Often, in the days crowded with new interests and tasks to be accomplished, my thoughts go back to friends in Kentucky and to the happy experiences which were mine while I was there.

May I through the pages of the "Quarterly" express to the many kind friends and associates of the Auxiliary, my thanks and appreciation to all who made the years spent in Kentucky so pleasant and worth while for me.

We are enjoying our new home and work. Our address is 467 4th Avenue, Salt Lake City, Utah. I would be delighted to hear from any of you at any time.

Success to the "Quarterly" and to every project of the Auxiliary and best wishes to every member.

(Mrs. John L.) Marie Jones.

## NATIONAL HEALTH INSTITUTE MOVED

Of interest to all citizens, particularly to mothers of young children receiving prophylactic medical care, from small-pox vaccination to "typhoid shots," is the announcement that the National Health Institute, the research branch of the United States Public Health Service, Washington, D. C., has, at last, moved into new, modern, adequately equipped headquarters. Two handsome limestone buildings now house this important ally of the medical practitioner and are located on the grounds of the Naval Hospital, at the foot of E Street, Northwest, just south of the disreputable old red brick building with its rickety stairway and cramped, dark, dusty cubicles passing for offices, congestion everywhere, which has been made to serve for years beyond its time. But, there is plenty of room, now. Ample space for

all the scientific workers and for their equipment, specimens and other material.

In the smaller of the two buildings, known as the Administration Building, are the executive offices, a reading room and a stack room. The latter is a veritable treasure house of Federal and State health reports.

But it is the other structure, the laboratory, which contains the drama of vital interest, for it is here that the ceaseless activities of the microbes are watched, developed and recorded by the scientists as they tenderly, conscientiously provide those tiny particles of life, germs used in pathological research snugly housed in their test tube boarding houses, with just the right media and the proper light and heat.

'Tis a wonderful world, just under the microscope! But we, uninitiated, know little about it. We cannot see with our naked eyes the wonderful things that happen there. We do know, though, that disease develops from the activity and the multiplicity of germs. We know too, that each disease has its own definite kind of germ, its seed, over some of which scientists can wield a magic wand of prevention, control or cure by enabling the attending physician to secure safe, standardized biologicals for his use in benefitting the patient, as for instance, toxoid for the prevention of diphtheria and antitoxin for the cure of diphtheria. Safe, standardized biologicals are a powerful weapon against disease when used by a qualified physician.

All mothers will be glad to know that Uncle Sam, through this agency, the Laboratory of the National Health Institute, stands guard over the quality of all interstate shipments of biologicals. Biologicals (vaccines, toxins, serums) are manufactured in several different States. No vaccine, no biological, unless it qualifies according to a required, definite standard may be shipped from one State to another. All must pass the United States Public Health standard for sterility, strength and toxic properties. This re-assures us, eliminating many doubts regarding the advisability of this newer method of treatment and we may well remind other mothers of our mutual good fortune that we and our children live in these days of preventive medicine.

## ARCHIVES

The chairman is pleased to acknowledge receipt of several newspaper clippings and other material, concerning Auxiliary activities within the past two months, and we are hoping for more notices in the future. Our aim is to have a perfect record, and without co-operation we cannot produce a complete Scrap Book.

Any clippings forwarded to Mrs. George A. Hendon, 615 Brown Building, Louisville, Ky. will be gratefully received and placed where they belong.

## CONSTITUTION AND BY-LAWS
### of the
## WOMAN'S AUXILIARY, KENTUCKY STATE MEDICAL ASSOCIATION

### CONSTITUTION

**Article 1—Name**

The name of this organization shall be the Woman's Auxiliary to the Kentucky State Medical Association.

**Article 2—Object**

The object of the Auxiliary shall be to extend the aims of the medical profession, through the women members of families of physicians, to other organizations which look to advancement in health and education; to assist in entertainment at State, District and County society meetings; to promote acquaintanceship among doctors' families, that local unity and harmony may be increased.

**Article 3—Membership**

(a) The membership of the Woman's Auxiliary to the Kentucky State Medical Association shall be composed of the membership of the Woman's Auxiliary to the County Medical Societies.

(b) The wives of members of County Medical Societies living in districts where there are no Auxiliaries may be invited to affiliate with the nearest County Auxiliary; or they may, as Members of the State at Large, send dues, One Dollar, annually to the State Secretary.

**Article 4—Officers**

The Officers of this Auxiliary shall be a President, a President-Elect, four Vice-Presidents, a Secretary, a Treasurer, and a Parliamentarian. (A Corresponding Secretary may be appointed by the President.)

**Article 5—Executive and Advisory Boards**

(a) These officers, together with the County President and the Chairmen of State Committees and the last three Past-Presidents of the State Auxiliary shall constitute an Executive Board to conduct the business of this Auxiliary.

(b) A regular meeting of the Board shall be held immediately before and after each annual meeting of the organization. Special meetings may be called by the President, or may be called upon written request of seven members of the Board.

(c) Four members of the Board shall constitute a quorum.

(d) The Executive Board shall have all power and authority over the affairs of the organization during the interim between its meetings, excepting that of modifying any action taken by the organization, and provided that no debt or liability, except for current expenses, shall be incurred by the Board. The Board is authorized to transact business by mail if necessary.

**Article 6—Elections**

(a) All officers shall be elected by ballot.

(b) The term of office of the Officers, with the exception of the President-Elect, shall begin at the close of the Annual Meeting at which they are elected. The term of office of the President-Elect shall begin at the close of the next Annual Meeting following the meeting at which she was elected. All officers serve one year, except the Secretary and the Treasurer who may be re-elected.

(c) All officers should be present at the meeting at which they are elected.

(d) A nominating committee shall be elected by the Executive Board to present a list of officers and representatives at the annual meeting; this committee to be composed of five members, not more than two of whom may be members of the Executive Board.

**Article 7—Meetings**

The meetings of the Woman's Auxiliary shall be held at the same time and place as the meetings of the State Medical Association. All members of County Auxiliaries have the privilege of attending the general meetings, but only accredited delegates may vote in the business of the meeting.

**Article 8—Delegates**

Each County Auxiliary shall be entitled to send its president and her alternate and one delegate and her alternate to each meeting. These accredited delegates with the members of the Executive Board form the voting body.

Twelve voting members shall constitute a quorum at any meeting of the organization, five of which shall be members of the Executive Board.

**Article 9—Dues**

A. Each County Auxiliary shall pay annually dues to the State Auxiliary at the rate of fifty cents per capita; this to include the dues of twenty-five cents per capita to the Woman's Auxiliary, American Medical Association, and the dues of one dollar per county organization, to the Woman's Auxiliary, Southern Medical Association. The dues, payable January 1st, should be sent to the National Auxiliary Treasurer and to the Southern Auxiliary Treasurer, by the State Treasurer.

B. Members of the State-at-Large shall pay their dues at the Annual Meeting or send them to the State Treasurer at that time.

C. A newly formed County Auxiliary shall pay an initiation fee of $2.00 in order to obtain representation at its first State Meeting. Thereafter, it shall pay its full membership dues at the rate of fifty cents per member to the State Treasurer at the end of the County Fiscal Year, as herein before provided.

**Article 10—Amendments**

This Constitution may be amended at any regular meeting of the Auxiliary, provided written notice has been sent each County Auxiliary, not less than two months prior to said meeting.

**Article 11—Parliamentary Authority**

The rules contained in Cromwell's Compendium of Parliamentary Law shall govern this organization in all cases to which they are applicable, and in which they are not inconsistent with this Constitution and By-Laws.

BY-LAWS

**1.—Duties of Officers**

The duties of the President, Vice-Presidents, Secretary and Treasurer shall be those which usually devolve upon such officers.

The duty of the First Vice-President shall be to act as chairman of organization.

**2.—Committees**

The President and Executive Board shall have power to create such committees as become necessary to promote the welfare of the Auxiliary, providing, insofar as practicable, committees to correspond with the national standing committees.

**3.—Meetings**

All meetings of the Auxiliary and the Executive Board shall be conducted according to the regular order of business and parliamentary laws which usually govern such meetings.

**4.—Quorum**

Four members of the Executive Board shall constitute a quoroum.

**5.—Amendments**

These By-Laws may be amended at any meeting of the Executive Board or at the annual meeting of the Auxiliary by a two-thirds vote of the members present, provided such amendments do not conflict with the spirit of the Constitution.

## News From the Counties

### BALLARD-CARLISLE

Miss Beatrice Harper, Secretary-Treasurer of the Ballard-Carlisle Auxiliary, has moved to Lone Oak and has difficulty in getting to the meetings, so, Mrs. W. A. Page, Barlow, is now acting as Secretary-Treasurer. The September meeting will be held Tuesday, the Fourth.

### CALLOWAY

Mrs. E. B. Houston was one of the speakers on the program of the quarterly meeting of the West Kentucky Health Units Association which met in Murray, August 23rd. Mrs. Houston discussed the interest of the Auxiliary in public health activities and described the Study Envelopes of the American Medical Auxiliary available to all Auxiliary members.

(Continued on Page 106)

# THE JANE TODD CRAWFORD MEMORIAL

## WHY NOT A JANE TODD CRAWFORD DAY?

Since December 13, 1934, will be the 125th anniversary of the first visit of Dr. Ephraim McDowell to see the Greensburg patient, Mrs. Jane Todd Crawford, why not, on this date, start a movement to make December 13th a regularly recognized Jane Todd Crawford Day? The thrilling story of these two intrepid pioneers will brighten the dullest winter day. And, perhaps, bring new courage, new faith, to others.

Each County Auxiliary will, doubtless, wish to develop its own type of program, either among its own members or in co-operation with other women's groups. There are rich possibilities for a wide variety of commemorative events. Several of the Clubs and P. T. A. Organizations have not yet been given a Jane Todd Crawford program. Has yours?

The State Chairman will welcome your suggestions. Please write her at 1422 Brown Hotel, Louisville, Kentucky.

## CHAIRMEN

The Jane Todd Crawford Chairman of the Southern Medical Auxiliary is Mrs. Charles W. Garrison, Little Rock, Arkansas.

The County Chairmen in Kentucky during the past year were:

Calloway—Mrs. Solon Higgins, Murray
Campbell-Kenton—Mrs. Clayton W. Shaw, Alexandria
Graves—Mrs. Herbert Hobson Hunt, Mayfield
Jefferson—Mrs. George A. Hendon, 615 Brown Building, Louisville
Marshall—Mrs. William T. Little, Calvert City
Nelson—Mrs. A. D. Steely, Bardstown
Perry—Mrs. Wm. L. Welch, Hazard

## JANE TODD CRAWFORD PROGRAM

Mrs. B. K. Menefee, our President, presented a Jane Todd Crawford program before the Woman's Club, Covington, April 16th.

Mrs. A. T. McCormack addressed the Woman's Club at Harrodsburg, March 2nd; the Woman's Club of Jessamine County, Nicholasville, May 14th and the Louisville Branch of the National League of Pen Women, May 17th.

# Summer Health School, Camp Taylor, Opened For Eight Weeks, July 16



Courtesy of The Courier-Journal

First game enjoyed, too, by Miss Viola Fitzpatrick, Chairman, Jefferson County Auxiliary's Bridge Party which raised the necessary funds to finance the summer school.

# Tuberculosis

Mrs. Lucius Ernest Smith, Louisville, State Chairman

## THE CHAIRMAN'S MESSAGE

"It is not life just to live, but to be well." This trite phrase holds for us a great truth. We all realize its value when we stop long enough to think about it, but we are under such stress, in these busy years, that it is difficult for us to appreciate the true significance of this pertinent saying until we feel our own strength slipping away from us, or, perhaps, until we have to administer to some dear one that has been stricken with disease. True, the unfortunate ones are alive, and, perhaps, they have more of the comforts of life than many of us, who are strong, but they know they are stifled and they cry out for real life. They realize "it is not life just to live, but to be well."

We have just passed through a trying season of the year, and many people who have been deprived of vacations, because of economic conditions, will not be ready for the physical strain the coming winter will bring to them. In every community there will be mothers who are weakened and tired; there will be children undernourished and with lowered vitality, so that their bodies will be fertile soil for the germs of disease that are spread about them; there will be bread winners who have become weary of the toil and stress of the long hot summer, and not ready to face the oncoming winter. All these will be in need of help.

Some of them may need only a bit of encouragement; some will need food, clothing and shelter; while others may be in dire need of medical and nursing care. In every community there will be a demand for those who are capable, willing and ready to render service to these worthy groups of Kentuckians.

A warning comes to us from the Kentucky Tuberculosis Association, that the death rate for Tuberculosis has risen in the past year. It is true that only 21 more deaths were reported in 1933 than in 1932, bringing the total deaths from Tuberculosis up to 2,266. It is also true that this small rise may have no great material bearing on the welfare of our State. Yet, by those students of Tuberculosis who watch the reaction of the various factors contributing to this increase in deaths from this outstanding disease, this is being recognized as the back wash from the period of depression we have been passing through.

As Tuberculosis Chairman of your organization, I urge every reader of this splendid publication to take this matter seriously. Let us not pass it on to some one else, and say in the trite old phrase "let some one else do it," for there may be no one else to do it. Every community needs leaders. There are always people who will serve if they are made to see the need of service. We are the wives of the physicians of Kentucky. We are in close contact with the Guardians of Health of every community. We are in position to know what should be done under certain circumstances, and we should be big enough to submerge all selfish interest for the sake of humanity. Every needy child is some one's loved one; and, a potential citizen. If we have no personal interest in them, if we have no children of our own to suffer directly because of these neglected ones, let us think of the future of our great State. And, with that pride that is pardonable for us who are ready to live or, in war-time "to die" to serve our State, let us rise up in our respective communities and create a demand for Life—Real Life. The Great Teacher said "I came that ye might have life—and have it more abundantly." So, let us not be satisfied with anything short of abundant life—free from the ravages and blight of Tuberculosis.

The fundamental factor in our great health program is education. The Kentucky Tuberculosis Association has accepted the responsibility of this program in the Tuberculosis field. It has a splendid plan, but must have financial support to carry it through. The sale of Christmas Seals in December is its only means of support.

There is no better way we can serve our organization, community and State than to enter heartily into this worthwhile program. Here is something every reader can do, and we should all be glad to do our bit.

When December approaches (and sooner if possible) please get in touch with those responsible for this work of the Christmas Seal Sale in your community and render every service possible. Should you need information, or should there be no Seal Sale conducted in your community, write the Kentucky Tuberculosis Association, Louisville.

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## VOICES FROM THE FIELD

This time we have a voice (not voices) from the field!

Mrs. R. T. Hudson reports something doing in Jefferson County all the time.

The Jefferson County Auxiliary has carried on a sewing project which included work for Camp Taylor Health School and Waverly Hills Sanatorium for three years. This project in the Tuberculosis field was made possible by the intense and intelligent interest of Mrs. S. C. McCoy, who, in 1931, went to Dr. Oscar Miller, the physician in charge of the Health School, and asked him for something to do. Dr. Miller gave Mrs. McCoy the names and addresses of some needy families, all cleared through the Social Service Exchange. Here, was a need and a worker, face to face. From this small beginning, the Sewing Unit, first under the direction of Mrs. C. G. Arnold, then under Mrs. George C. Leachman, and now under Mrs. F. Parks Ogden, together with the Hospital and Welfare Committee under the leadership of Mrs. S. C. McCoy, have developed their work until today they are rendering a great service to the Tuberculosis program in Jefferson County.

Through interest in this fine piece of work, and stimulated by needs so evident at the time of the Come-And-See trips during the Lenten Season, the Auxiliary recently sponsored a card party benefit for the Camp Taylor Health School. The money, thus raised, made it possible for the School to continue its Vacation Program and continue it good work during the summer instead of allowing the progress of the children to relapse.

What has been done in Jefferson County can be done in other Counties in our State. Are you interested enough to try to help your physicians solve their problems along this line?

Another good piece of work, stimulated by the Club Women in Jefferson County, has resulted in a fine lot of reading material for Waverly Hills Sanatorium. Hazelwood, our State Sanatorium, could use books and magazines, too. Fresh, new up-to-date magazines are warmly welcomed by patients, particularly by the Shut-Ins.

The libraries and High School reading rooms in every County need "Hygeia" and the "Journal of the Outdoor Life" placed on their tables. Will not the County Auxiliaries consider this bit of introductory health education as their own particular project? There are generous people in every community ready to help supply such good material. They are only waiting for someone, you or me, to bring them face to face with the needs.

There is much to be done. Let us each try hard to make this year the most worthwhile year of our lives. It is our challenge, yours and mine!

"OUR ABILITY IS THE MEASURE OF OUR RESPONSIBILITY."

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How many names in your County are found in the Index, our first, on pages 126-127?

### TB—LETS

The so-called "Bronchial Cough" of an aged person, may be tuberculous; better make sure.

Many children are infected with Tuberculosis annually by "Asthmatic" Grandparents.

There are advanced cases of Tuberculosis that give no detectable physical signs. Let the doctor decide.

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## News From the Counties

(Continued from Page 103)

### CAMPBELL-KENTON

Mrs. B. K. Menefee entertained over 200 guests at a birthday party in honor of Dr. Menefee, August 18th, on the terrace overlooking the Licking River, at their home in Covington. Many Happy Returns, Dr. Menefee!

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Now that vacations are over, Mrs. H. C. White, our President, and her new corps of officers are planning for an active year of work.

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### GRAVES

An interesting meeting was held August 14th at the home of Mrs. H. H. Hunt, Mayfield. The Annual Meeting with election of officers is scheduled for early September.

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### JEFFERSON

The Auxiliary sponsored a bridge party, open to the public, on Monday, May 28th, in the Roof Garden of the Brown Hotel, Louisville. The proceeds netted almost Two Hundred Dollars which amount was turned over to the Louisville Tuberculosis Association to be used for the summer session of the Camp Taylor Health School. As a result, 20 children have enjoyed the privilege and the benefit of an 8 week summer session. Miss Viola Fitzpatrick acted as Chairman of this party and was ably assisted by the following Committees: Mrs. J. W. Fitzpatrick, Tickets; Mrs. George C. Leachman, Cards and Tallies; Mrs. S. C. McCoy, Cakes and Candies; Mrs. Charles H. Moore, Table Prizes; Miss Grace Stroud, Publicity.

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The Installation of new officers took place at the business meeting held June 4, at the Pendennis Club, when interesting annual reports were made by the chairmen of the several committees. The annual luncheon that followed was presided over by our new President, Mrs. L. Lyne Smith and was attended by 56 members. A very enjoyable program had been arranged by our Retiring President, Mrs. J. Duffy Hancock. Mrs. Cordie Greer Petrie delighted us with one of her original character readings, "Angeline On Antiques." Mrs. Claire Logan gave an interesting talk on "The Creation of Our Present Day Styles" and Mr. Harry Albert caused much merriment with his impersonations of Movie Stars.

An event, always anticipated with pleasure, took place this year on Tuesday, June 12th, when the members of the Sewing Unit met at the beautiful country home of Mrs. S. C. McCoy on the Preston Street Road for the annual picnic. This is an annual event made possible by the generosity and charming hospitality of Dr. McCoy and Mrs. McCoy. At noon a delicious lunch was served "alfresco" after which members divided into small groups playing cards, knitting or sewing, while others availed themselves of the opportunity to enjoy a walk in the woods. Hours flew fast and the time to bid adieu arrived all too soon. But, as all good things must end, this perfect day, also, came to a happy close.

With the appointment of Mrs. J. P. Boulware as Chairman of Golf, new interest has been injected into this activity of our County Auxiliary. At the Women's Falls City Golf Association Tournament held at the Louisville Country Club on Tuesday, August 21st, our Golf Unit was represented by three members finishing the 18 holes. Trophies donated by the Buschemeyer Drug Company and the Wickersham Drug Company were won by Mrs. Hubert Viars Noland with 75 low gross and Mrs. Wible Stewart Carter with 89 low net. Mrs. Boulware's efforts, no doubt, will be rewarded by several new members taking part in the next tournament which is scheduled for September 4th at the Green Fields Country Club.

Auxiliary members will be pleased to learn that Mrs. Ed Combs Redmon has recovered sufficiently to return to her home on South First Street after spending six months as a patient at Norton Infirmary.

Miss Bess Altman, daughter of Dr. G. G. Altaman and Mrs. Altman, was united in marriage to Dr. Shelton H. Mann, of New Brunswick, New Jersey, formerly of Louisville. The ceremony was performed at seven o'clock Sunday evening, July 22nd, by Rabbi Greenwald, at the home of the bride's parents, 2040 Eastern Parkway.

Dr. George C. Leachman and Mrs. Leachman announce the engagement of their daughter, Margaret Louise, to Mr. James F. Sullivan. No date has been set for the wedding.

Mrs. William A. Jenkins announces the engagement of her daughter, Ruth Irwin, to Mr. John Parker Sippel of Baltimore, Maryland. The wedding will take place in the autumn.

Auxiliary members extend sympathy to Mrs. Henry C. Hermann on the death of her father, the Rev. Wm. F. Rodgers, on August 18th, aged 86 years.

## MERCER

Three new members, Miss Elizabeth Van Arsdall, Mrs. Hunter Coleman, both of Harrodsburg, and Mrs. Bishop Wash, Cornishville, were added to our membership before the summer recess during July and August. Our next meeting will be held on September 17th.

The first activity of this new County Auxiliary was participation in the preparations for the Pioneer Doctor's Celebration on June 21st in Harrodsburg when "The Doctor's Shop," a small brick building adjoining The Mansion was dedicated by appropriate ceremonies in charge of the Kentucky State Medical Association, State Park Commission, the Pioneer Memorial Park Association and local committees.

## NELSON

Dr. A. D. Steeley and Mrs. Steeley and their little son, Carl Victor, are enjoying a vacation trip through Chicago and Michigan.

Dr. J. I. Greenwell, Mrs. Greenwell, and son, Richard, attended the Convention of the American Medical Association held in Cleveland, in June.

Mrs. E. D. Mudd who has been critically ill, is convalescing.

Mrs. C. B. Elston submitted to a minor operation at St. Anthony Hospital, Louisville, recently. (Mrs. Elston is a daughter of Dr. J. G. Carpenter, Stanford.)

We have started the search for antiques for "The Doctor's Shop," at Harrodsburg.

New members are Mrs. Ida Jane Pritchett, New Haven and Miss Kathleen Greenwell, New Haven.

## PERRY

The Year Book for the Perry County Auxiliary, a neatly bound booklet dressed in russet and black, has been in the hands of members since early June, giving the monthly programs, names of Officers, Committee Chairmen and members, through March, 1935.

A new project for the coming year, will be a Sewing Unit when members will sew for the two hospitals located in Hazard.

A Benefit Tea is planned for the Frontier Nursing Service in October.

Twelve subscriptions were secured for Hygeia during the past year.

Mrs. C. B. Elston submitted to a minor op- brother, who lives near Chicago, and then spent several days at A Century of Progress, during August.

## AUDITOR'S REPORT

## EXTRACT FROM THE AUDITOR'S REPORT TO THE COUNCIL OF THE KENTUCKY STATE MEDICAL ASSOCIATION

I have also examined the records of Mrs. Edna R. Krieger, Treasurer of the Woman's Auxiliary, and Business Manager of "The Quarterly" from July 20 to December 31, 1933 and Mrs. Peter Guntermann, Business Manager, from January 1, to July 31, 1934 and find them correct as set forth in the schedule herewith submitted.

Respectfully,

(Signed) B. P. EUBANK.

### Accounts of the Woman's Auxiliary to the Kentucky State Medical Association

### EXHIBIT "A"

RECEIPTS

| | | | |
|---|---|---|---|
| Gross dues received | $111.50 | | |
| Less Refunds | 3.00 | $108.50 | |
| Less American Medical Auxiliary dues | | 67.00 | |
| State Dues Received | | | $ 41.50 |
| Miscellaneous Receipts | | | 7.00 |
| Total Receipts for 1933-34 | | | $ 48.50 |

DISBURSEMENTS

| | | | |
|---|---|---|---|
| Bond | $ 5.00 | | |
| Printing, Stationery and Cards | 20.45 | | |
| Postage and Clerical Work | 34.36 | | |
| Miscellaneous | 10.57 | | |
| Government Tax | .50 | | |
| Total Disbursements | | $ 70.88 | |
| Loss on 1933-34 Operation | | $ 22.38 | |
| Balance on hand July 31, 1933, First National Bank, Bardstown Road Branch, Louisville | | 113.62 | |
| Balance on hand July 31, 1934, First National Bank, Bardstown Road Branch, Louisville (Checking Account) | | | $ 91.24 |

SAVINGS ACCOUNTS

| | | | |
|---|---|---|---|
| The Louisville Trust Company, Louisville (Bank Closed) | | $ 102.56 | |
| The Louisville Trust Company Certificate of Deposit Cashed | | 57.98 | |
| | | | $ 57.98 |
| Balance in Closed Bank | $ 44.58 | | |
| Interest | 2.09 | | |
| Balance, covered by Depositors Refunding Certificate | | | $ 46.67 |
| Balance, First National Bank, account of Jane Todd Crawford Memorial Fund | | | $658 31 |

### EXHIBIT "B"

### Jane Todd Crawford Memorial Fund
### 1933-34

| | | | | | |
|---|---|---|---|---|---|
| | | Balance Forward, August 1, 1933 | | | $605.82 |
| 1933 | | | | | |
| Sept. | 18 | Graves County Auxiliary | | | $ 5.00 |
| 1934 | | | | | |
| Jan. | 22 | Perry County Auxiliary, proceeds from tea at home of Mrs. W. L. Welch | | | 12.60 |
| Mar. | 5 | Honorarium for address by Mrs. A. T. McCormack to Mothers Dept., Woman's Club, Harrodsburg, Ky. Marguerite I. Bonte, Treas. | | | 5.00 |
| May. | 15 | Honorarium for address by Mrs. A. T. McCormack to the Jessamine Woman's Club, Nicholasville, Ky. | | | 10.00 |
| June | 1 | Contribution, Mrs. Geo. S. Brock | | | 2.00 |
| | | Receipts for Year | | | $34.60 |
| 1933 | | | | | |
| Dec. | 31 | Interest | 9.07 | | |
| 1934 | | | | | |
| June | 30 | Interest | 9.48 | $18.55 | |
| | | Less Government Tax | | .66 | $ 17.89 |
| | | Total Receipts for Year | | | $ 52.49 |
| | | Total Receipts to date, Agreeing with Bank Balance | | | $658.31 |

### EXHIBIT "C"

### Paid Membership to August 1, 1934

| | 1932 | 1933 | 1934 |
|---|---|---|---|
| Allen | 4 | — | — |
| Ballard-Carlisle | — | — | 12 |
| Calloway | 2 | 6 | 5 |
| Campbell-Kenton | 26 | 24 | 11 |
| Graves | 11 | 17 | — |
| Jefferson | 193 | 36 | 83 |
| Marion | 11 | — | 1 |
| Marshall | 6 | 9 | 5 |
| Nelson | — | 8 | 10 |
| Perry | 24 | 27 | 22 |
| State at Large | 7 | 17 | 20 |
| | 284 | 144 | 169 |

## EXHIBIT "D"

Detailed Statement of Receipts and Disbursements of Mrs. Edna R. Krieger, Treasurer, Woman's Auxiliary, Kentucky State Medical Association, from July 31, 1933, to July 31, 1934:

| | | | Receipts | Disbursements |
|---|---|---|---|---|
| 1933 | | | | |
| July | 31 | —Balance Forward | $113.62 | |
| " | 31 | Dues, State at Large, Mrs. W. M. Martin | 1.00 | |
| " | 31 | Dues, State at Large, Mrs. Rose Coldiron Conlee | 1.00 | |
| Aug. | 9 | Dues, State at Large, Mrs. O. R. Kidd | 1.00 | |
| " | 9 | Dues, Graves County, 12 members (1932-33) | 6.00 | |
| " | 9 | Dues, State at Large, Mrs. Emma Davis | 1.00 | |
| " | 9 | Handbook, Jefferson County | .60 | |
| " | 9 | Check No. 19, Mrs. W. E. Fallis, State Historian, Envelopes | | 2.70 |
| " | 12 | Dues, State at Large, Mrs. J. H. Parker, Corbin | 1.00 | |
| " | 23 | Dues, Marshall County, 5 members | 2.50 | |
| " | 26 | Check No. 20, Mrs. A. T. McCormack, for Chm. Public Inst. Mrs. E. B. Houston | | 1.42 |
| " | 26 | Check No. 21, Miss Mayme Sullivan, for Chm. Organization, Mrs. B. K. Menefee | | 6.30 |
| " | 26 | Check No. 22, Mrs. A. T. McCormack, President's Account for Postage and Office Supplies | | 16.76 |
| " | 26 | Check No. 23, Mrs. J. L. Jones, Chm. Radio, Postage | | 1.80 |
| " | 26 | Check No. 24, Mrs. A. M. Gross, Chm. Public Relations, Postage and Clerical Work | | 5.00 |
| " | 26 | Check No. 52, Mrs. C. A. Menefee, Scrap Book for A. M. A., Postage etc. | | 1.04 |
| " | 26 | **Check No. 26,** Mrs. B. K. Menefee, Chm. Organization, Postage | | 3.00 |
| " | 30 | Dues, Calloway County, 2 meubers | 1.00 | |
| Sept. | 11 | Dues, Graves County, 5 members | 2.50 | |
| " | 6 | Check No. 27, Mrs. C. H. Krieger, Telegram Nat'l Treas. | | .60 |
| Sept. | 12 | Dues, State at Large, Mrs. Carl Norfleet, Somerset | 1.00 | |
| " | 12 | Check No. 28, Mrs. J. W. Sams, Cor. Secy, Postage, etc. | | 1.06 |
| " | 12 | Dues, State at Large, Mrs. J. T. Reddick, Paducah | 1.00 | |
| " | 12 | Dues, State at Large, Mrs. G. S. Brock, London | 5.00 | |
| " | 12 | Dues, Calloway County, 3 members | 3.00 | |
| " | 12 | Dues, State at Large, Mrs. C. C. Threlkel, Morgantown | 1.00 | |
| " | 12 | Dues, Jefferson County, 1 member | 1.00 | |
| " | 12 | Dues, State at Large, Mrs. J. M. English, Elizabethtown | 1.00 | |
| " | 12 | Dues, State at Large, Mrs. A. W. Davis, Madisonville | 1.00 | |
| " | 12 | Dues, State at Large, Mrs. O. M. Goodloe, Jackson | 1.00 | |
| " | 12 | Dues, State at Large, Mrs. J. M. Bailey, Paducah | 1.00 | |
| " | 12 | Dues, Marshall County, 1 member | 1.00 | |
| " | 12 | Dues, State at Large, Mrs. G. L. Thompson, Calhoun | 1.00 | |
| " | 12 | Dues, Ballard-Carlisle County, Mrs. R. C. Burroughs, Cunningham | 1.00 | |
| " | 12 | Dues, Marion County, 1 member, Mrs. O. M. Crenshaw | 1.00 | |
| " | 12 | Handbooks, | | |
| | | Calloway County | .60 | |
| | | Campbell-Kenton County | .60 | |
| | | Marshall County | .60 | |
| " | 12 | Dues, Ballard-Carlisle County, Miss Beatrice Harper, Lovelaceville | 1.00 | |
| Sept. | 16 | Check No. 29, Milliken-Plamp and Company, Bond | | 5.00 |
| Oct. | 29 | Dues, Nelson County, 10 members | 5.00 | |
| Oct. | 30 | Check No. 30, (Rebate) Mrs. C. H. Jones, dues 3 Calloway County members paid to State Treasurer | | 1.50 |
| " | 30 | Check No. 31, (Rebate) Mrs. W. T. Little, dues 1 member, Marshall County paid to State Treasurer | | .50 |
| " | 30 | Check No. 32, (Rebate) Mrs. O. M. Crenshaw, dues 1 member Marion County, paid to State Treasurer | | .50 |
| " | 30 | Check No. 33, (Rebate) Mrs. Curt H. Krieger, dues 1 member, Jefferson County, paid to State Treasurer | | .50 |
| Oct. | 30 | Check No. 34, Cash for Postage | | 2.00 |
| Nov. | 2 | Handbook, Nelson County | .60 | |
| " | 3 | Check No. 35, Times-Journal Publishing Company, Stationery | | 17.75 |
| " | 27 | Dues, State at Large, Mrs. Alonzo Huffman | 1.00 | |
| Dec. | 4 | Check No. 36, Clarence R. Smith & Co., Supplies for State Historian | | 2.25 |
| | | Check Tax, August .02 | | |
| | | Check Tax, Sept. .10 | | |
| | | Check Tax, Oct. .08 | | |
| | | Check Tax, Nov. .06 | | |
| | | Check Tax, Dec. .06 .32 | | |
| 1934 | | | | |
| Jan. | 18 | Dues, Jefferson County, 82 members | 41.00 | |
| " | 21 | Check No. 37, Mrs. Jas. F. Percy, dues to National Aux. 268 members | | 67.00 |
| " | 26 | Dues, Campbell-Kenton County, 11 members | 5.50 | |
| March | 5 | Check No. 38, Mrs. W. E. Fallis, Historian, Postage | | .50 |
| " | 8 | Check No. 39, Mrs. R. L. Collins, Chm. Finance | | 3.20 |
| " | 30 | Dues, Ballard-Carlisle, 10 members | 5.00 | |
| May | | Dues, Perry County, 22 members | 11.00 | |
| " | 28 | Dues, Marshall County, 5 members 1934 and 3 members 1933 | 4.00 | |
| June | 5 | Dues, Mrs. C. P. Coogle, Houston, Texas, State at Large | 1.00 | |
| " | 12 | Initiation fee, Woman's Auxiliary to the Samson Community Hospital Medical Society | 2.00 | |
| " | 12 | Initiation fee, Woman's Auxiliary to the Mercer County Medical Society | 2.00 | |
| | | Check Tax, Jan . .02 | | |
| | | Check Tax, Feb. .02 | | |
| | | Check Tax, Apr. .06 | | |
| | | Check Tax, June .02 | | |
| | | Check Tax, July .06 .18 | | |
| | | Total Receipts | $232.12 | |
| | | Total Disbursements | | $140.88 |
| | | Balance on hand, First National Bank, Bardstown Road Branch, Louisville | | 91.24 |
| | | | $232.12 | $232.12 |

## EXHIBIT "E"

Collections and Disbursements by Mrs. Edna R. Krieger, Business Manager, from July 20 to December 31, 1933, and Mrs. Peter Guntermann, Business Manager, from January 1 to July 31, 1934, on account of The Quarterly supplement to the Kentucky Medical Journal, known as—Part II—Woman's Auxiliary Section corresponding with checks, deposits and receipts filed.

RECEIPTS

| | | |
|---|---|---|
| Balance on hand, July 20, 1933 | $ 22.08 | |
| Receipts from Advertisers, July 20, 1933, to July 31, 1934 | 903.51 | |
| Donations and Sale of Extra Copies | 56.00 | |
| Total Receipts | | $981.59 |

DISBURSEMENTS

| | | |
|---|---|---|
| Disbursed for compiling, printing and mailing The Quarterly to date | $798.56 | |
| Bank Service | 1.50 | |
| Government Tax | .39 | $800.45 |
| Balance in First National Bank, Shawnee Branch, Louisville | | $181.14 |
| Check on hand for deposit, | | |
| 25% Commission on ad, Kentucky Medical Journal | | 14.91 |
| Accounts Receivable: | | |
| 1932 Accounts | $ 55.00 | |
| 1933 Accounts | 43.75 | |
| 1934 Accounts | 281.75 | |
| | $380.50 | |
| Accounts Payable | 253.64 | 126.86 |
| Gain on The Quarterly | | $322.91 |

## EXHIBIT "F"

### Donations for The Quarterly and Receipts from Sale of Extra Copies.

| | | | |
|---|---|---|---|
| 1933 | | | |
| July | 31 | Mrs. W. C. Pool Cary, Mississippi | $1.00 |
| Aug. | 9 | Mrs. Willard Bartlett, St. Louis, Missouri | 1.00 |
| Aug. | 16 | Mrs. A. B. McGlothlan, St. Joseph Missouri | 1.00 |
| Sept. | 1 | Mrs. Robt. E. Fitzgerald, Wauwatosa, Wisconsin | 1.00 |
| | 5 | Mrs. James Blake, Hopkins, Minnesota | 1.00 |
| | 9 | Mrs. W. M. Martin, Harlan, Kentucky | 1.00 |
| Nov. | 2 | Mrs. M. T. Shearer, Truro, Nova Scotia | 1.00 |
| Dec. | 4 | Mrs. M. P. Overholser, Harrisonville, Missouri | 1.00 |
| 1934 | | | |
| Feb. | 1 | Mrs. James F. Percy, Los Angles, California | 1.00 |
| Jan. | 20 | Mrs. R. L. Compton, Osgood, Indiana | 1.00 |
| Jan. | 20 | A Friend | 5.00 |
| Jan. | 20 | Miss Grace Stroud, Louisville, Kentucky | 1.00 |
| Jan. | 20 | Calloway County Auxiliary, Mrs. C. H. Jones, Treasurer | 2.00 |
| Feb. | 22 | Mrs. E. B. Houston, Murray, Kentucky | 1.00 |
| Mar. | 6 | Jefferson County Auxiliary, Mrs. C. H. Krieger, Treasurer | 10.00 |
| Mar. | 6 | Perry County Auxiliary, Mrs. R. L. Collins, Treasurer | 5.00 |
| Mar. | 24 | Nelson County Auxiliary, Mrs. A. D. Steely, Treasurer | 5.00 |
| July | 1 | Mrs. C. P. Corn, Greenville, South Carolina | 1.00 |
| July | 1 | Mrs. C. P. Coogle, Houston, Texas | 1.00 |
| | | Total | 41.00 |

SALE OF EXTRA COPIES

| | | | |
|---|---|---|---|
| Mar. | 30 | Mrs. Irvin Abell, Louisville, Kentucky (20 copies Jan. issue) | 5.00 |
| Apr. | 2 | A. M. A. Auxiliary, Mrs. Jas. Blake, President, (40 copies, Jan. issue) | 10.00 |
| | | Total | 15.00 |
| | | Total Donations and Receipts from Sale of Extra Copies for 1933-34 | $56.00 |

## EXHIBIT "G"

### The Quarterly—Accounts Receivable

| Firm | Agent | Amount | |
|---|---|---|---|
| Stults Motor Company (Dead account) | Mrs. O. P. Miller | $60.00 | $ 55.00 |
| 1933 | | | |
| Peter & Burghard Stone Company | Mrs. A. T. McCormack | 12.50 | |
| B. J. Johnson & Sons | Mrs. A. T. McCormack | 11.25 | |
| Kentucky Book Manufacturing Co. | Mrs. A. T. McCormack | 20.00 | 43.75 |
| 1934 | | | |
| Aetna Oil Service | Mrs. P. Guntermann | $ 20.00 | |
| Berry, John T. | Mrs. A. T. McCormack | 11.25 | |
| Groeers Baking Company | Mrs. A. T. McCormack | 65.00 | |
| Haupt, Fred | Mrs. A. T. McCormack | 5.00 | |
| Imorde, B & W. | Mrs. John C. Rogers | 6.50 | |
| Jaglowicz, J. A. | Mrs. A. T. McCormack | 11.25 | |
| Louisville Chemical Company | Mrs. G. A. Hendon | 20.00 | |
| Model Drug Store | Mrs. David Cohen | 11.25 | |
| Medical Arts Prescription Shop | Mrs. David Cohen | 11.25 | |
| Muth Optical Company | Mrs. G. A. Hendon | 11.25 | |
| Newman Drug Company | Mrs. A. T. McCormack | 20.00 | |
| Sanders, N. M. & Son | Mrs. A. T. McCormack | 15.00 | |
| Swiss Cleaners & Dyers | Mrs. P. Guntermann | 11.25 | |
| Shrader Brothers | Mrs. P. Guntermann | 11.25 | |
| Stoll Oil Refining Company | Mrs. A. T. McCormack | 11.25 | |
| Times-Journal Publishing Co. | Mrs. A. T. McCormack | 9.00 | |
| Walsh, The Misses | Mrs. A. T. McCormack | 11.25 | |
| Wilderness Road Book Shop | Mrs. G. A. Hendon | 20.00 | $281.75 |
| | Total | | $380.50 |

## EXHIBIT "H"

### Accounts Payable

| | |
|---|---|
| Times-Journal Publishing Company, for July issue of the Supplement to the Kentucky Medical Journal | $233.00 |
| Mrs. A. T. McCormack, Editor, for operating expenses, September 20, 1933 to July 9, 1934 | 20.64 |
| Total | $253.64 |

## EXHIBIT "I"

### Detail of Advertisements Secured From October, 1933-July 31, 1934 for Publication During 1934

| Firm | Agent | Contract | Paid |
|---|---|---|---|
| Aetna Oil Service | Mrs. P. Guntermann | $ 20.00 | 20.00 |
| Aetna Oil Service | Mrs. P. Guntermann | 20.00 | 20.00 |
| Berry, John T. | Mrs. A. T. McCormack | 11.25 | .... |
| Cralle Co., Lee E. | Mrs. A. T. McCormack | 11.25 | 11.25 |
| Cowherd & Co., J. W. | Mrs. A. T. McCormack | 11.25 | 11.08 |
| Cherokee Sanitary Milk Co. | Mrs. J. L. Jones | 11.25 | 11.25 |
| Donaldson Baking Co. | Mrs. John C. Rogers | 11.25 | 11.25 |
| Deckels Market | Mrs. G. A. Hendon | 20.00 | 20.00 |
| Denunzio, Jos. | Mrs. G. A. Hendon | 11.25 | 11.25 |
| Ewing Von Allman Dairy Co. | Mrs. A. T. McCormack | 10.00 | 10.00 |
| Ewing Von Allman Dairy Co. | Mrs. A. T. McCormack | 100.00 | 100.00 |
| Federal Hill Art and Gift Shop | Mrs. A. D. Steeley | 6.50 | 6.50 |
| The Gilliland Laboratories | Mrs. A. T. McCormack | 60.00 | 60.00 |
| Gibbs-Inman Company | Mrs. A. T. McCormack | 20.00 | 19.60 |
| Grocers Baking Company | Mrs. A. T. McCormack | 35.00 | 35.00 |
| Grocers Baking Company | Mrs. A. T. McCormack | 65.00 | .... |
| Haupt, Fred | Mrs. A. T. McCormack | 15.00 | 15.00 |
| Hampton Cracker Company | Mrs. A. T. McCormack | 35.00 | 34.30 |
| Imorde, B. & W. | Mrs. John C. Rogers | 6.50 | 6.50 |
| Imorde, B. & W. | Mrs. John C. Rogers | 6.50 | 6.50 |
| Jaglowicz, J. A. | Mrs. A. T. McCormack | 11.25 | .... |
| Jefferson County Milk Commission | Mrs. G. A. Hendon | 20.00 | 20.00 |
| Kentucky Dairies, Inc. | Mrs. A. T. McCormack | 11.25 | 11.25 |
| Ky. & Ind. Terminal Railroad | Mrs. A. T. McCormack | 35.00 | 35.00 |
| Louisville Apothecary | Mrs. G. A. Hendon | 11.25 | 11.05 |
| Louisville Chemical Company | Mrs. G. A. Hendon | 20.00 | .... |
| Louisville Grocery Company | Mrs. G. A. Hendon | 6.50 | 6.50 |
| Miller Paper Company | Mrs. A. T. McCormack | 20.00 | 20.00 |
| Maloney-Davidson Company | Mrs. S. C. McCoy | 11.25 | 11.25 |
| Model Drug Store | Mrs. David Cohen | 11.25 | .... |
| Medical Arts Prescription Co. | Mrs. David Cohen | 11.25 | 11.25 |
| Muth Optical Company | Mrs. G. A. Hendon | 11.25 | 11.25 |
| Newman Drug Company | Mrs. A. T. McCormack | 20.00 | .... |
| Stoll Oil Refining Company | Mrs. A. T. McCormack | 11.25 | 11.25 |
| Stearns Coal Company | Mrs. A. T. McCormack | 11.25 | 11.02 |
| Sanders & Son, N. M. | Mrs. A. T. McCormack | 20.00 | 5.00 |
| Southern Optical Company | Mrs. A. T. McCormack | 20.00 | 19.60 |
| Swiss Cleaners & Dyers | Mrs. P. Guntermann | 11.25 | .... |
| Stratton & Terstegge Company | Mrs. John C. Rogers | 6.50 | 6.37 |
| Shrader Bros. | Mrs. P. Guntermann | 11.25 | .... |
| Stoll Oil Refining Company | Mrs. A. T. McCormack | 11.25 | 11.25 |
| Tafel, Theo. | Mrs. G. A. Hendon | 20.00 | 20.00 |
| Times-Journal Publishing Co. | Mrs. A. T. McCormack | 35.00 | 26.00 |
| Walsh, The Misses | Mrs. A. T. McCormack | 11.25 | .... |
| Wilderness Road Book Shop | Mrs. G. A. Hendon | 20.00 | 20.00 |
| Young, C. W., Grocer | Mrs. Hugh N. Leavell | 6.50 | 6.37 |
| Totals | | $882.75 | 683.81 |
| Bush-Krebs, Engravers, Payable in Service | Mrs. A. T. McCormack | 35.00 | 3.38 |
| Grand Totals | | 917.75 | 687.09 |

## EXHIBIT "J"

| | |
|---|---|
| Total Amount of Advertising Contracts for 1934 | 917.75 |
| Total Amount of 1934 Advertising Paid for up to 8-28-1934 | 687.09 |
| Balance Accounts Receivable for 1934 | 230.66 |

PAID ON OLD ACCOUNTS DURING 1934

| Name | Agent | Amount Paid |
|---|---|---|
| Muth Optical Company | Mrs. G. A. Hendon | 2.82 |
| Ky. Book Mnfg. Company | Mrs. A. T. McCormack | 1.75 |
| Total Received on Old Contracts to 8-28-1934 (Cash) | | 4.57 |
| Bush-Krebs Company Paid in Service during 1934 | | 5.19 |
| Total Received on Old Accounts in Cash and Service | | 9.76 |

OLD CONTRACTS NOT PAID

| Name | Agent | Contract |
|---|---|---|
| Burghard Stone Company | Mrs. A. T. McCormack | 12.50 |
| Johnson & Son, B. J. | Mrs. A. T. McCormack | 11.25 |
| Ky. Book Mnfg. Company 1932 | Mrs. A. T. McCormack | .75 |
| Ky. Book Mnfg. Company 1933 | Mrs. A. T. McCormack | 20.00 |
| Stultz Motor Company (Bankrupt) | Mrs. O. P. Miller.....) | 55.00 |
| Total Old Contracts Not Paid up to 8-28-1934 | | 99.50 |
| Less Stultz Motor Company (Bankrupt) | | 55.00 |
| Total Old Accounts Not Paid | | 44.50 |

NEW CONTRACTS SECURED FOR OCTOBER 1934 ISSUE

| Firm | Agent | Contract |
|---|---|---|
| Kleinman's (Furrier) | Mrs. G. A. Hendon | 11.25 |
| Brakmeier Bros. | Mrs. A. T. McCormack | 20.00 |
| Haupt, Fred | Mrs. A. T. McCormack | 15.00 |
| Young, C. W., Grocer | Mrs. Hugh N. Leavell | 6.50 |
| 12 Friends in Harlan, Kentucky (Received to late to itemize in this report) | Mrs. W. M. Martin, totaling | 90.76 |
| | | $111.26 |

STATEMENT OF CASH RECEIPTS AND DISBURSEMENTS WOMAN'S AUXILIARY SECTION, JANUARY 1, 1934 TO SEPTEMBER 1, 1934

| | | |
|---|---|---|
| RECEIPTS | | |
| January, 1934 | $ 94.35 | |
| February | 262.72 | |
| March | 94.69 | |
| April | 105.00 | |
| May | 8.75 | |
| July | 91.32 | |
| August | 87.25 | |
| Total Receipts | | $744.08 |
| DISBURSEMENTS | | |
| 2-24-1934 Check No. 1 Times-Journal | 200.00 | |
| 3- 1-1934 Check No. 2 Cash—Stamps | 2.50 | |
| 3-12-1934 Check No. 3 Times-Journal | 37.50 | |
| 4-18-1934 Check No. 4 Cash—Stamps | 2.50 | |
| 5- 2-1934 Check No. 5 Times-Journal | 233.00 | |
| 8-25-1934 Check No. 6 Times-Journal | 233.00 | |
| 8-27-1934 Check No. 7 Mrs. A. T. McCormack—Exp. | 20.64 | |
| Federal Bank Tax | .19 | |
| Total Disbursements | | $729.33 |
| Balance 8-28-1934 as per Cash Book | | 14.75 |

RECEIPTS MADE UP AS FOLLOWS:

| | |
|---|---|
| Received on Contracts | $ 688.38 |
| Donations | 50.00 |
| Balance from Mrs. Kreiger to close Account Liberty Bank & Trust Co. | 5.70 |
| Total Receipts as Above | $ 744.08 |

## BETTER FILMS COUNCIL, JEFFERSON COUNTY

**Mrs. Emmet F. Horine, Louisville, President**

### POWER OF THE SCREEN

People who have made a study of juvenile delinquency have found that a very large percentage of such delinquency is traceable to the effect of motion pictures. Things that have little or no effect on those who have the self-control of maturity have a very deleterious effect on children and adolescents.

People of the nation are beginning to realize that the insidious attack contained in a great many pictures on the sanctities of life must be stopped if we are to continue as a Christian Nation.

We all realize that some of the worst pictures really reflect life as it is lived in certain places; but just as we realize that every sewer contains refuse which, if unleashed, would destroy the health and well being of the community, so do we know that if the product of the emotional sewers continues to be flashed on the screen, mental and moral health will be greatly injured. Our National Health will be wrecked if we continue to romanticize immorality, to glorify gangsters and to floppishly portray the public officials of our Nation.

The Russian Government, realizing the power of motion pictures to put across propaganda, adopted this means of putting their governmental philosophy across and thus gained millions of supporters in the Communist Army. They have broken home life; they have turned the back of the Nation on God; they have broken the faith of the people in their former form of government. Then, when these anchors of the people were uprooted, and they had nothing to take their places, it was easy for the Communist leaders to seize control of the government for the moral and national conscience of the people had become flabby, and deadened. We have only to look at Russia and Germany today to see the deplorable effect of dictatorship on the women, and children and the homes of those Nations.

When the children of a Nation suffer, when the homes of a Nation are molested, the populace is generally aroused. No sacrifice is too great to retain the home or to restore better conditions for the children. It is patriotic to fight for the fundamental principles and ideals that made America. Because American government is founded on democracy, and democracy is in turn founded on Christianity, the great Churches of America are fighting shoulder to shoulder to clean up motion pictures and to get them to portray the things that are actually worth while. The insidious attack on the Ten Commandments contained in so many motion pictures lately is an attack on Christianity and Democracy.

Women should be particularly interested in this fight, because Christianity and Democracy have elevated women from the lowly position of slavery to a pinnacle of equality and security formerly enjoyed only by men. This position which they have, due to the consideration of Christian men, places a great responsibility on the shoulders of American women.

This fight for cleaner films is a fight to keep refuse from the boulevards of the mind, as sewers keep refuse from the pavement of the city streets. It is a fight to save America from the ravages of dictatorship. It is a fight to make the children of America better citizens and to keep the United States of America the greatest Democracy on earth through the retention of Christianity. By supporting the Better Films Council of Louisville and Jefferson county every citizen of Kentucky will be working toward this end.

Virginia T. Keyer, Publicity Chairman.

# DIRECTORY OF COUNTY MEDICAL AUXILIARY ORGANIZATIONS

## BALLARD- CARLISLE COUNTIES

Organized at Cunningham, September 5, 1933. Regular meetings, quarterly, first Tuesday in March, June, September, July. Annual Meeting, September 4, 1934. Fiscal Year, January 1 to December 31.

ADVISORY COUNCIL

OFFICERS 1933-1934

President—Mrs. Earl Edwin Smith, Bardwell
Secretary-Treasurer—Mrs. William A. Ashbrook, R. D. 2, La Center
Historical Collections—Mrs. W. A. Page, Barlow

COMMITTEE CHAIRMAN

Program—Mrs. James Frederic Harrell, Bardwell

ACTIVE MEMBERS

Ashbrook, Mrs. William A., R. D. 2, La Center
Benson, Mrs. E. W., Bardwell
Gholson, Mrs. William E., R. D. 1, La Center
Hahs, Mrs. J. F. La Center
Harper, Miss Beatrice, Lone Oak
Harrell, Mrs. James Frederic, Bardwell
Kennedy, Mrs. E. L., Milborn
Mosby, Mrs. Mattie Petrie, Bardwell
Page, Mrs. W. A., Barlow
Payne, Mrs. George W., Bardwell
Smith, Mrs. Earl Edwin, Bardwell

## CALLOWAY COUNTY

Organized May 7, 1929 at Murray. Irregular meetings. Annual Meeting, October, 1933 Fiscal Year, January 1 to December 31.

ADVISORY COUNCIL

J. A. Outland, M. D., Murray C. H. Jones, M. D., Lynn Grove W. F. Grubbs, M. D., Hazel

OFFICERS 1933-1934

President—Mrs. Edward Brent Houston, Murray
Secretary-Treasurer—Mrs. Cody Harrison Jones, Lynn Grove
Historical Collections—Mrs. J. H. Coleman, Murray

COMMITTEE CHAIRMEN

Hygeia—Mrs. James Alfred Outland, Murray
Jane Todd Crawford Memorial—Mrs. Solon Higgins, Murray

ACTIVE MEMBERS

Atkins, Mrs. Neil Morris, Murray
Blalock, Mrs. Elijah Robert, New Concord
Graves, Mrs. Wildy Harding, Murray
Grubbs, Mrs. William Francis, Hazel
Higgins, Mrs. Solon, Murray
Houston, Mrs. Edward Brent, Murray
Jones, Mrs. Cody Harrison, Lynn Grove
Keys, Mrs. Ben Butler, Murray
Mason, Mrs. Robert M., Murray
Outland, Mrs. James Alfred, Murray
Stark, Mrs. Joseph Victor, Kirksey

## CAMPBELL-KENTON COUNTIES

Organized January 31, 1930, at Covington. Regular meetings, first Thursday of each month. Annual Meeting, April, 1934. Fiscal year, February 1 to January 31.

ADVISORY COUNCIL

John E. Dawson, M. D., Newport
Charles Atwood Menefee, M. D., Covington
William R. Miner, M. D., Fort Mitchell

OFFICERS 1934-1935

President—Mrs. Henry Clay White, 3823 Decoursey Avenue, Covington
1st Vice-President—Mrs. Irene Schaber, 1001 Olhatin Avenue, Dayton
2nd Vice-President—Mrs. Charles Baron, 34th Street, Covington
Secretary—Mrs. Luther Bach, 325 Taylor Avenue, Bellevue
Treasurer—Mrs. Clayton Whittemore Shaw, Alexandria
Parliamentarian—Mrs. Bartlett Kniffin Menefee, 2120 Glenway, Covington

COMMITTEE CHAIRMEN

Historical Collection—Mrs. Nelson Asbury Jett, 108 East Southern Avenue, Covington
Hygeia—Mrs. Luther Bach, 325 Taylor Avenue, Bellevue
Jane Todd Crawford Memorial—Mrs. Nelson Asbury Jett, 108 East Southern Avenue, Covington
Membership—Mrs. John Todd, Sixth, at Park Avenue, Newport
Program—Mrs. Charles Baron, 34th Street, Covington
Publicity—Miss Pauline C. Haley, 302 Doctor's Building, Covington
Social—Mrs. William Richard Miner, Arcadia Drive, Fort Mitchell

ACTIVE MEMBERS

Bach, Mrs. Luther, 325 Taylor Avenue, Bellevue
Baron, Mrs. Charles, 34th Street, Covington
Bell, Mrs. Francis Eulon, 225 Elm Street, Ludlow
Biltz, Mrs. Stuart Goslin, 601 Monroe Street, Newport
Blades, Mrs. John M., Butler
Caldwell, Mrs. James Asher, 131 Electric Avenue, Southgate
Caldwell Mrs. John Hadley, Eighth and Walnut Streets, Newport
Jett, Mrs. Nelson Asbury, 108 East Southern Avenue, Covington
Jolson, Mrs. Meyer Stanley, 535 Scott Street, Covington
Justice , Mrs. Charles Wheeler, 440 Elm Street, Ludlow
Menefee, Mrs. Bartlett Kniffin, 2120 Glenway, Covington
Menefee, Mrs. Charles Atwood, 302 Earle Avenue, Covington
Metcalfe, Mrs. Annabel, Independence
Miner, Mrs. William Richard, Arcadia Drive, Fort Mitchell, Covington
Morris, Mrs. Chester Atherton, 316 West 34th St., Covington
Northcutt, Mrs. Edgar William, 104 East 25th St., Covington
Northcutt, Mrs. Joseph Donephin, Florence
Rolf, Mrs. John Joseph, 322 West 17th St., Covingtou
Schaber, Mrs. Irene, 1001 Olhatin Avenue, Dayton
Shaw, Mrs. Clayton Whittemore, Alexandria
Todd, Mrs. John, Sixth and Park Avenue, Newport
White, Mrs. Henry Clay, 3826 Decoursey Ave., Covington
Wilson, Mrs. Herbert Fleming, 1000 Greenup St., Covington

ASSOCIATE MEMBERS

Acree, Miss Lena, 2120 Glenway, Covington
Haley, Miss Pauline Catherine, 302 Doctor's Building, Covington

## GRAVES COUNTY

Re-organized August 20, 1931 at Mayfield. Quarterly meetings, January, April, July, October. Annual Meeting September 10, 1934 Fiscal year, September 1 to August 31.

ADVISORY COUNCIL

H. H. Hunt, M. D., Mayfield W. E. Merritt, M. D., Fancy Farm H. V. Usher, M. D., Sedalia

OFFICERS 1934-1935

President—Miss Jincy Hunt, Mayfield
Vice-President—Mrs. Moza West Hurt, Mayfeild
Secretary-Treasurer—Mrs. Harland Vernon Usher, Sedalia

COMMITTEE CHAIRMEN

Jane Todd Crawford Memorial—Mrs. Herbert Hobson Hunt. Mayfield
Hygeia—Mrs. Moza West Hurt, Mayfield
Tuberculosis—Mrs. William J. Shelton, Mayfield

ACTIVE MEMBERS

Colley, Mrs. Lube Gerard, Farmington
Colley, Miss Ruth, Farmington
Colley, Miss Sunshine, Farmington
Dismukes, Mrs. John Lynch, Mayfield
Fuller, Mrs. George Terrell, Mayfield
Hargrove, Mrs. Wilbur Samontha, Hickory
Hunt, Mrs. Herbert Hobson, Mayfield
Hunt, Miss Jincy, Mayfield
Hurt, Mrs. Moza West, Mayfield
Merritt, Mrs. Wilbur Ernest, Fancy Farm
Mullins, Mrs. Stanley, Wingo
Pryor, Mrs. John Ray, Mayfield
Puryear, Mrs. John Gabriel, Mayfield
Shelton, Mrs. John Henry, Mayfield
Shelton Mrs. Will Jasper, Mayfield
Usher, Mrs. Harlan Vernon, Sedalia
Vaughn, Mrs. William Thomas, Mayfield
Walters, Mrs. Earl Charles, Mayfield

## HARLAN COUNTY

Re-organized at Harlan, May 31, 1934. Regular meetings, last Saturday of each month. Annual Meeting, May, 1935. Fiscal Year, June 1 to May 31.

ADVISORY COUNCIL

Clark Bailey, M. D., Harlan E. M. Howard, M. D., Harlan
W. R. Parks, M. D., Harlan

OFFICERS 1934-1935

President—Mrs. William Monroe Martin, Louellen
Vice-President—Mrs. Clark Bailey, Harlan
Secretary-Treasurer—Mrs. Joseph W. Nolan, Harlan

COMMITTEE CHAIRMEN

Archives—Mrs. William E. Riley, Harlan
Child Health and Welfare—Mrs. Clark Bailey, Harlan
Hygeia—Mrs. William M. Anderson, Cumberland
Jane Todd Crawford Memorial—Mrs. Seymore Rowland, Cawood
Organization—Mrs. Elhanon Murphy Howard, Harlan
Tuberculosis—Mrs. William P. Cawood, Harlan

ACTIVE MEMBERS

Abell, Mrs. Carl F., Lenarue
Anderson, Mrs. William M., Cumberland
Bailey, Mrs. Clark, Harlan
Buttermore, Mrs. Harry K., Liggett
Cawood, Mrs. William P., Harlan
Eaken, Mrs. Ernest W., Kildave
Goodwin, Mrs. Asa Floyd, Louellen
Gunn, Mrs. Milus L., Harlan
Howard, Mrs. Emanon Murphy, Harlan
Lewis, Mrs. Preston O., Evarts
Martin, Mrs. Martha, (W. Dr. T. J. M.) Louellen
Martin, Mrs. William Monroe, Louellen
Parks, Mrs. William K., Harlan
Petty, Mrs. Carlisle Ragsdale, Lynch
Reagan, Mrs. Barney, Cosplint
Riley, Mrs. William E., Harlan
Rowland, Mrs. Seymore H., Cawood
Stout, Mrs. Fred, (S. Dr. Darwin) Louellen

## JEFFERSON COUNTY

Organized September 18, 1926 at Louisville. Regular meetings: Business luncheon meetings held quarterly, first Monday of March, June, September, December. Study Class meets at 11:00 A. M., first Monday each month from October through April. Sewing Unit meets at 10:00 A. M., second Tuesday of each month in all day session. Golf Unit, in conjunction with the Falls City Golf Association, meets in turn, at the various private and Municipal Courses, on the first and third Tuesdays of the month from April through October. Election of Officers, at March quarterly meeting with Installation at June quarterly meeting, which is the Annual Meeting, when Annual Reports are made. Fiscal Year, April 1 to March 31.

ADVISORY COUNCIL

Irvin Abell, M. D., Louisville  Guy Aud, M. D., Louisville
Charles W. Hibbitt, M. D., Louisville

OFFICERS 1934-1935

President—Mrs. Lucien Lyne Smith, 208 Pleasantview Ave.
1st Vice-President—Mrs. Stephen Clifford McCoy, Preston Street Road
2nd Vice-President—Mrs. Curt Herbert Krieger, 2000 Grasmere Drive
3rd Vice-President—Mrs. John Paul Keith, 2206 Napoleon Boulevard
4th Vice-President—Mrs. Roscoe Conklin Adams, 2044 Alta Drive
Secretary—Mrs. Richard Taylor Hudson, 322 Stiltz Avenue
Treasurer—Miss Grace Strond, 424 East Lee Street
Parliamentarian—Mrs. William A. Jenkins, 2072 Sherwood Avenue

ADVISORY COMMITTEE

Mrs. Oscar Oswald Miller, 2321 Alto Avenue
Mrs. William Edgar Fallis, 2046 Sherwood Avenue
Mrs. Stephen Clifford McCoy, Preston Street Road
Mrs. James S. Lutz, 4349 Park Boulevard
Mrs. George Clinton Leachman, 1820 Casselberry Road
Mrs. John King Freeman, 2104 West Broadway
Mrs. Philip Earl Blackerby, 4617 South Sixth Street

COMMITTEE CHAIRMEN

Better Films Council—Mrs. L. Lyne Smith, 208 Pleasantview
Fruit and Flowers—Mrs. William Edgar Fallis, 2045 Sherwood Avenue.
Golf—Mrs. Judson Powell Boulware, Springdale Apt., Spring Drive
Historical Collections—Mrs. John King Freeman, 2104 West Broadway
Hospital and Welfare—Mrs. Stephen Clifford McCoy, Preston Street Road
Hygeia—Mrs. Henry Christian Herrmann, 4011 West Broadway
Jane Todd Crawford Memorial—Mrs. George Albert Hendon, 615 Brown Building
Luncheon and Decorations—Mrs. Joseph W. Fitzpatrick, 2327 Bonnycastle
Mayor's Committee—Mrs. James Duffy Hancock, 80 Valley Road
Membership—Mrs. J. Hunter Peak, 2091 Sherwood Avenue
Music—Mrs. Joseph Carr Ray, 313 Fairlawn
Publicity—Miss Viola Fitzpatrick, 2327 Bonnycastle
Public Relations—Mrs. Arthur Thomas McCormack, Brown Hotel
Scrap Book—Mrs. Melvion Haroutyonn Mathewsian, 4026 South Third Street
Sewing Unit—Mrs. F. Parks Ogden, 4454 South Sixth Street
Study Class—Mrs. William Kenneth Kannard, 4303 West Market Street
Radio—Mrs. Gustave Granman Altman, 2040 Eastern Parkway
Telephone—Mrs. Oliver Patterson Miller, 1431 Tyler Park Drive
Tuberculosis—Mrs. Harry W. Venable, 2108 Strathmore Boulevard

HONORARY MEMBERS

Miss Louise Morel, 2051 Sherwood Avenue
Granville Scott Hanes, M. D., Brown Hotel

ACTIVE MEMBERS

(All of Louisville unless otherwise indicated)

Abell, Mrs. Irvin, 1433 South Third Street
Adams, Mrs. Roscoe Conklin, 2044 Alta Drive
Altman, Mrs. Gustave Grauman, 2040 Eastern Parkway
Arnold, Mrs. Calvin Garnett, 2000 South Third Street
Asman, Mrs. Bernard, Buechel, Kentucky
Aud, Mrs. C. Z., 1648 Edenside Avenue
Aud, Miss Nancy, 1648 Edenside Avenue
Baker, Mrs. Melvin Clinton, 208 South Galt Avenue
Baker, Mrs. William T., 317 Central Avenue
Barbour, Mrs. Philip Foster, 1304 South Sixth
Barnett, Mrs. Arthur Morrell, 4511 Southern Parkway
Blackerby, Mrs. Philip Earl, 4617 South Sixth Street
*Blake, Mrs. Blanche, 2200 Alta Avenue
Bohannan, Mrs. Frank Charles, 308 Shawnee Terrace
Borgman, Mrs. Deddo H. W., 1832 West Main Street
Boulware, Mrs. Judson Powell, Spring Dale Apts, Spring Drive
Browustein, Mrs. Samuel Joseph, 2059 Alta Avenue
Bumgardner, Mrs. Jacob Samuel, 2000 Spring Drive
Carter, Mrs. Roy Lewis, 2014 Cherokee Parkway
Carter, Mrs. Wible Stewart, 2120 Woodford Place
Cleu, Mrs. John Grigsby, 1435 Willow Avenue
Cohen, Mrs. David, 2023 Eastern Parkway
Crane, Mrs. James Frances, 2013 Lauderdale Road
Crice, Mrs. Thomas J., 2203 Lauderdale Road
Davidson, Mrs. Harry Adolf, 1601 Windsor Place
Dorsey, Mrs. Thomas Manning, 200 West Shestnut Street
Dravo, Mrs. Emery Low, 1405 Cress Road, Castlewood
Dugan, Mrs. F. Clark, 420 West Breckenridge Street
Dugan, Mrs. Wm. Clark, Finchville, Ky., R. F. D. No. 1
Durrett, Mrs. L. P., 407 Harrison Ave., Jeffersonville, Ind.
Dusch, Mrs. Joseph F., 4523 Western Parkway
Dyer, Mrs. Garland Lambuth, Buechel, Ky.
Eggers, Mrs. Hiram Simm, 2516 Glenmary Avenue
Emrich, Mrs. Wm. H., 842 South Second Street
English, Mrs. Carroll Chapman, 1712 South Third Street
Erustberger, Mrs. Lee James, 629 East Broadway
Fallis, Mrs. Wm. Edgar, 2046 Sherwood Avenue
Fenner, Mrs., 309 N. W. Parkway
Ferguson, Mrs. John Prestou, 4242 River Park Drive
Fischer, Mrs. Edward Harris, 2100 Woodford Place
Fitch, Mrs. Josiah W., 1800 South Second Street
Fitzpatrick, Mrs. Joseph W., 2327 Bonnycastle Avenue
Fitzpatrick, Miss Viola, 2327 Bonnycastle Avenue
Fort, Mrs. Frank T., 1426 South Third Street
Freeman, Mrs. John King, 2104 West Broadway
Fugate, Mrs. Isaac Tyler, 2208 Alta Avenue
Gardner, Mrs. Wm. Emmet, 1405 Rosewood Avenue.
Gaupin, Mrs. Chas. Edward, 689 South W. Parkway
Gibbs, Mrs. James D., Commodore Apts.
Gray, Mrs. Kenneth, Harrods Creek, Kentucky
Goodman, Mrs. Arthur Ouchterlony, 1910 S. Third Street
Guntermann, Mrs. Peter, 674 S. 40th Street
Hall, Mrs. Gaylord, Indian Hills
Hancock, Mrs. James Duffy, 80 Valley Road
Haskell, Mrs. Abraham Irving, 2204 Lauderdale Road
Heflin, Mrs. Ernest Lee, 2611 Top Hill Road
Helms, Mrs. Jas. E., 2015 West Broadway
Henderson, Mrs. Elmer Lee, 87 Valley Road.
Hendon, Mrs. George Albert, 615 Brown Building
Hackett, Mrs. Louis Joseph, 2511 Napoleon Boulevard
Herrmann, Mrs. Henry Christian, 4011 West Broadway
Hester, Mrs. James Harvey, Jeffersontown, Kentucky
Herzer, Mrs. Henry Arch, 2105 Rutnertord Avenue
Henry, Mrs. Michael Joseph, 1226 Summitt Avenue
Hoddy, Mrs. E. J., 2210 Alta Avenue
Holbrook, Mrs. Raymond New, 901 Greenleaf Road
Horine, Mrs. Emmet Field, 1509 Rosewood Avenue
Hudson, Mrs. Richard Taylor, 322 Stiltz Avenue
Hulskamp, Miss Clara C., 546 West St. Catherine Street
Hume, Mrs. Walter Irvine, 2218 Village Drive
Jefferson, Mrs. Chas. Wm., 2424 Longest Avenue
Jenkins, Mrs. Wm. A., 2072 Sherwood
Jensen, Mrs. Martin Hans, 2500 Napoleon Boulevard
**Jones, Mrs. John Lewis, 1911 Roanoke Avenue
Jones, Mrs. Aubrey Verner, 110 South Western Parkway
Kannard, Mrs. Wm. Kenneth, 4303 West Market Street
Keany, Mrs. John M. F., 1600 Eastern Parkway
Keith, Mrs. David Yaudell, 40 Hill Road
Keith, Mrs. John Paul, 2206 Napoleon Boulevard
Kelley, Mrs. Brown Wilson, 4538 South Sixth Street
Kelly, Mrs. Clinton Wayne, Weissinger-Gaulbert Apt
Kelsall, Mrs. Oliver Holt, 4704 Southern Parkway
Koch, Mrs. Ernest H., 3800 West Broadway
Kremer, Mrs. Eugene Heeb, 2536 Broadmeade Avenue
Krieger, Mrs. Curt Herbert, 2000 Grasmere Drive
Langolf, Mrs. Louise, 643 East Oak Street
Lawson, Mrs. George McLean, 1201 Audubon Parkway
Leachman, Mrs. George Clinton, 1820 Casselberry Road

*Deceased

**Moved to Salt Lake City.

Leavell, Mrs. Hugh Nelson, 1479 South Fourth Street
Mrs. Hugh Rodman Leavell, 2350 Speed Avenue
Legectt, Mrs. Albert E., 2112 Eastern Parkway
Leigh, Mrs. Armistead Macon, 2416 Frankfort Avenue
Lucas, Mrs. Chas George, Owen-Hill Apts.
Lukins, Mrs. Joshua Bell, 1280 Eastern Parkway
Lutz, Mrs. James S., 4349 Park Boulevard
Lynch, Mrs. Thos. Ignatius, 2236 Osage Avenue
McCormack, Mrs. Arthur Thomas Brown Hotel
McCoy, Mrs. Stephen Clifford, Preston Street Road
McKeithan, Mrs. Archibald Murdoch, 1340 S. Third Street
McKenney, Mrs. Elbert, B., 4501 Southern Parkway
McNally, Mrs. Ida L., 269 Pennsylvania Avenue
McNeill, Mrs. Clyde, 1126 Audubon Park
Martin, Mrs. Wm. J., 3005 Brownsboro Road
Mathewsian,, Mrs. Melvion Haroutyoun, 4026 S. Third. St.
Meyers, Mrs. Sidney J., 1910 South Third Street
Miller, Mrs. Harold Faulkner, 4458 Park Boulevard
Miller, Miss Mary E., 1431 Tyler Park Drive
Miller, Mrs. Oliver Patterson, 1431 Tyler Park Drive
Miller, Mrs. Oscar Oswald, 2321 Alta Avenue
Moore, Mrs. Chas. Hudson, 782 Eastern Parkway
Moore, Mrs. John Walker, Blankenbaker Lane
Meyers, Miss Louise, 1910 South Third Street
Neblett. Mrs. Lamar Wm., 2406 Glenmary Avenue
Nicholsou, Mrs. Woodward, 1708 Harvard Drive
Ogden, Mrs. F. Parks, 4454 South Sixth Street
Overstreet, Mrs. Samuel Alvin, 1223 Bardstown Road
Owen, Mrs. Wm. Barnett, 1257 Cherokee Road
Parker, Mrs. Joseph Skees, 630 Harrison Avenue
Peak, Mrs. J. Hunter, 2091 Sherwood Avenue
Pfingst, Mrs. Adolph O., 1009 Cherokee Road
Phillips, Miss Nonnie, 4022 West Broadway
Pirkey, Mrs. Everett Leighton, 1705 Tyler Parkway
Pritchett, Mrs. Jas. Henry, 4529 Southern Parkway
Ray, Mrs. Geo. Homer, 116 Mayfair
Ray, Mrs. Joseph Carr, 313 Fairlawn
Reesor, Mrs. Otter Robinson, 2303 Village Drive
Rogers, Mrs. John Clayton, 1479 South Fourth Street
Ritter, Mrs. Harry Nichols, 1611 Windsor Place
Roser, Mrs. Chas. Jr., 125 N. Western Parkway
Sams, Mrs. James Woodville, Crestwood, Ky.
Sandidge, Mrs. Prescott, 1334 Cherokee Road
Sauter, Miss Elizabeth, 1801 Edenside
Smith, Mrs. Lucius Ernest, 439 Fairlawn Road
Smith, Mrs. Lucien Lyne, 208 Pleasantview Avenue
Solomon, Mrs. Leon L., 2327 Carolina Avenue
Speidel, Mrs. Edward, 2014 Cherokee Parkway
Stokes, Mrs. Edgar William, 923 Cherokee Road
Stroud, Miss Grace, 424 East Lee Street
Sudbnry, Mrs. M. M., 724 South Second Street
Sullivan, Miss Mayme, 532 West Main Street
Thompson, Miss Simmone, Preston St. Rd., R. 4, Box 330
Tracy, Mrs. Edward Joseph, 444 East Oak Street.
Tuley, Mrs. Henry Enos, 124 Beach Road, Wodmont, Conn.
Turner, Mrs. Paul Akers, Hazelwood Sanitorium
Tye, Dr. Lillian South, 532 West Main Street
Venable, Mrs. Harry W., 2108 Strathmoor Boulevard
Victor, Mrs. Karl Norvin, 1414 Eastern Parkway
Weinberg, Mrs. S. W., 1817 Windsor Place
White, Mrs. Wm. Clayborne, 408 West Ormsby Avenue
Wilhoit, Mrs. Fred L., 331 East Gray Street
Wilson, Mrs. Garnett H., Cannon's Lane, Route 1
Wood, Mrs. C. F., 1453 South Third Street
Wright, Mrs. Rivers, Seelbach Hotel
Wynn, Mrs. Jos. J., 32 Eastover Street

## MARSHALL COUNTY

Organized, September 7th, 1926, at Benton. Regular meetings, third Friday evening each month. Annual Meeting, March 16, 1934. Fiscal year, September 1 to August 31.

ADVISORY COUNCIL

L. L. Washburn, M. D., Benton W. T. Little, M. D., Calvert City V. A. Stilley, M. D., Benton

OFFICERS 1933-1934

President—Mrs. William Speer Stone, Benton
Vice-President—Mrs. Samuel Lafayette Henson, Benton
Secretary-Treasurer—Mrs. William Thomas Little, Calvert City
Historical Collections—Mrs. Van Albert Stilley, Benton

COMMITTEE CHAIRMEN

Hygeia—Mrs. Van Albert Stilley, Benton
Jane Todd Crawford Memorial—Mrs. William Thomas Little, Calvert City
Press and Publicity—Mrs. Lawrence Lee Washburn, Benton

ACTIVE MEMBERS

Eddleman, Mrs. Owen Albert, R. R. 6, Benton
Henson, Mrs. Samuel Lafayette, Benton
Little, Mrs. William Thomas, Calvert City
Stilley, Mrs. Van Albert, Benton
Washburn, Mrs. Lawrence Lee, Benton
Stone, Mrs. William Speer, Benton

## MERCER COUNTY

Organized May 31, 1934, at Harrodsburg. Regular meetings, third Monday of each month, September through June. Annual Meeting, June, 1935. Fiscal year, June 1 to May 31.

ADVISORY COUNCIL

Condit B. Van Arsdall, M. D., Harrodsburg
Thomas Jefferson Price, M. D., Harrodsburg
Thomas Overton Meredith, M. D., Harrodsburg

OFFICERS 1934-1935

President—Mrs. Thomas Meredith, Jr., Burgin
1st Vice-President—Miss Gladys Seay, Salvisa
2nd Vice-President—Mrs. J. Thomas Price, Harrodsburg
Secretary—Mrs. John Burton Robards, Harrodsburg
Treasurer—Mrs. Condit B. Van Arsdall, Harrodsburg

COMMITTEE CHAIRMEN

Historical Collections—Miss Elizabeth Van Arsdall, Harrodsburg

ACTIVE MEMBERS

Coleman, Mrs. Clelland, Harrodsburg
Coleman, Mrs. Hunter, Harrodsburg
Goddard, Mrs. Glave, Harrodsburg
Johnson, Mrs. Green, Harrodsburg
Meredith, Mrs. Thomas Overton, Harrodsburg
Meredith, Mrs. Thomas Overton, Jr., Burgin
Price, Mrs. Thomas Jefferson, Harrodsburg
Riker, Mrs. Lafon, Harrodsburg
Robards, Mrs. John Burton, Harrodsburg
Seay, Mrs. Ezra Vallandingham, Salvisa
Seay, Miss Gladys, Salvisa
Van Arsdall, Mrs. Condit B., Harrodsburg
Van Arsdall Miss Elizabeth, Harrodsburg
Wash, Mrs. Bishop, Cornishville

## NELSON COUNTY

Organized October 14, 1931, at Bardstown. Regular meetings second Tuesday of each month. Annual Meeting. October 9, 1934. Fiscal year, November 1 to October 31.

ADVISORY COUNCIL

R. H. Greenwell, M. D., Bardstown E. D. Mudd, M.D., New Haven J. J. Wakefield, M. D., Bloomfield

OFFICERS 1933-1934

President—Mrs. Joseph Ignatius Greenwell, New Haven
Vice-President—Mrs. Charles Benton Elston, Bardstown
Secretary-Treasurer—Mrs. Arthur Dillman Steely, Bardstown

COMMITTEE CHAIRMEN

Archives—Mrs. Holman McCawley, Bardstown
Child Health and Welfare—Mrs. Laura B. Summers, Bardstown
Historical Collections—Mrs. William J. Roby, Bardstown
Hygeia—Mrs. Arthur Dillman Steely, Bardstown
Jane Todd Crawford Memorial—Mrs. Arthur Dillman Steely, Bardstown
Organization—Mrs. Joseph Ignatius Greenwell, New Haven
Public Instruction—Mrs. Joseph Ingatius Greenwell, New Haven
Public Relations—Mrs. Edward Denotas Mudd, New Haven
Tuberculosis—Mrs. Laura B. Summers, Bardstown

HONORARY MEMBER

Mrs. Laura Beckwith Summers, Bardstown

ACTIVE MEMBERS

Crume, Miss Elise, Bardstown, (S. Dr. Wm. Keith Crume)
Crume, Mrs. William Ernest, Bardstown
Elston, Mrs. Charles Benton, Bardstown
Greenwell, Mrs. Joseph Ignatius, New Haven
Greenwell, Miss Katherine, New Haven
Greenwell, Mrs. Richard Henry, Bardstown
Kirk, Mrs. George Wallace, Shepherdsville (Bullitt County)
McCawley, Mrs. Holman, Bardstown
Mudd, Mrs. Edward Denotas, New Haven
Pritchett, Mrs. Ida Jane, New Haven
Roby, Mrs. William J., Bardstown
Steely, Mrs. Arthur Dillman, Bardstown
Wood, Mrs. Ernest Carlton, Bloomfield

## PERRY COUNTY

Organized July 11, 1927 at Hazard. Regular meetings, first Friday of each month. Annual Meeting, April 6, 1934. Fiscal year, May 1 to April 30.

ADVISORY COUNCIL

R. L. Collins, M. D., Hazard J. M. Ray, M. D., Allais
Dana Snyder M. D., Hazard

OFFICERS 1934-1935

President—Mrs. Hunter Watkins Gingles, Hardburley
1st Vice-President—Mrs. Simon Barron Snyder, Hazard
2nd Vice-President—Mrs. Parker L. Johnston, Hazard
3rd Vice-President—Mrs. Joseph Manuel Ray, Allais
Secretary-Treasurer—Mrs. Amerida M. Gross, Hazard
Corresponding Secretary—Mrs. Frank F. Shelton, Hazard

COMMITTEE CHAIRMEN
Devotional—Mrs. James Preston Boggs, Hazard
Historical Collections—Mrs. Frank F. Shelton, Hazard
Hygeia—Mrs. R. L. Goad, Hazard
Jane Todd Crawford Memorial—Mrs. William L. Welch. Hazard
Membership—Everyone
Music—Mrs. Joseph Manuel Ray, Allais
Publicity—Mrs. Simon Barron Snyder, Hazard
Public Relations—Mrs. James Edward Hagan, Hazard
Scrap Book—Mrs. Simon Barron Snyder, Hazard
Tuberculosis—Mrs. Dishman C. Combs, Hazard

HONORARY MEMBERS
Breckinridge, Mrs. Mary, Hyden and Wendover (Director, The Frontier Nursing Service)

ACTIVE MEMBERS
Adams, Mrs. George M., Hazard
Anderson, Mrs. Charles Marion, Napfor
Boggs, Mrs. James Preston, Hazard
Bogardus, Mrs. George, Hyden
Carr, Mrs. David Decatur, Hazard
Coldiron, Mrs. John Corbett, Hazard
Collins, Miss Dorothy, Hazard
Collins, Mrs. Robert Lee, Hazard
Combs, Mrs. Marshall E., Hazard
Davis, Mrs. Lawrence O., Hazard
Duke, Mrs. John W. Hindman
Duke, Miss Lottie, Hindman
Dunfee, Mrs. Harry, Hazard
Fitzpatrick, Mrs. Ben, Hazard
Gingles, Mrs. Hunter Watkins, Hardburly
Gross, Mrs. Amerida M., Hazard
Hagan, Mrs. James Edward, Hazard
Hensley, Mrs. Hiram, Kodak
Hobbs, Mrs. Walter H., Glomawr
Johnston, Mrs. Parker L., Hazard
Kelly, Mrs. Manford Fulton, Hindman
Ray, Mrs. Joseph Manuel, Allais
Riggins, Mrs. N. G., Hazard
Ritchie, Mrs. Samuel Marcellus, Hazard
Salyers, Mrs. Kelso, N., Jeff
Snyder, Mrs. Charles Dana, Hazard
Snyder, Mrs. Simon Barron, Hazard
Stoddard, Mrs. James Kent, Wooten
Welch, Mrs. William L., Hazard

ASSOCIATE MEMBERS
Combs, Mrs. Dishman C., Hazard
Fouts, Mrs. J. William, Hazard
Goad, Mrs. R. L., Hazard
Peacock, Miss Gladys, Hyden, (Nurse)
Shelton, Mrs. Frank F., Hazard
Steele, Mrs. J. C., Hazard
Willeford, Miss Mary B., Hyden (Nurse)

## SAMSON COMMUNITY HOSPITAL AUXILIARY

Organized June 5, 1934 at Glasgow. Regular meetings, first Tuesday of each month. Annual Meeting, June, 1935. Fiscal year, June 1 to May 31.

ADVISORY COUNCIL
Caswell C. Turner, M. D., Glasgow W.A. Weldon, M. D., Glasgow E. D. Turner, M. D., Cave City

OFFICERS 1934-1935
President—Mrs. Robert Joseph Hansel, Mammoth Cave
Vice-President—Mrs. Ernest Arthur Barnes, Albany
Secretary-Treasurer—Mrs. Caswell C. Turner, Glasgow

COMMITTEE CHAIRMEN
Archives—Mrs. Ernest Arthur Barnes, Albany
Jane Todd Crawford Memorial—Mrs. Carl Clifford Howard, Glasgow
Program—Mrs. Helen Curry, Glasgow

ACTIVE MEMBERS
Barnes, Mrs. Ernest Arthur, Albany
Bushong, Miss Corinne, Thompkinsville
Bushong, Mrs. George Eagle, Tompkinsville
Bushong, Mrs. George W., Tompkinsville
Hansel, Mrs. Robert Joseph, Mammoth Cave
Howard, Mrs. Carl Clifford, Glasgow
Ray, Mrs. Herschel Biggerstaff, Tompkinsville
Stephanson, Mrs. Sam, Albany
Tanner, Mrs. Jacob Leland, Glasgow
Turner, Mrs. Caswell C., Glasgow
York, Mrs. Paul S., Glasgow

ASSOCIATE MEMBER
Curry, Mrs. Helen C., Glasgow
Dunkelberger, Miss Florence, Glasgow
Haase, Miss Lydia, Glasgow

### STATE-AT-LARGE

Bailey, Mrs. J. M., Paducah
Brock, Mrs. G. S., London
Conlee, Mrs. Rose Coldiron, 1041 Bardstown Rd., Louisville
Coogle, Mrs. C. P., 1303 Cleburne, Houston, Texas
Davis, Mrs. A. W., Madisonville
Davis, Mrs. Emma, Southern Hotel, Frankfort
English, Mrs. J. M., Elizabethtown
Goodloe, Mrs. O. M., Jackson
Huffman, Mrs. Alonzo, Russell
Kidd, Mrs. O. R., 305 N. 5th St., Paducah
Norfleet, Mrs. Carl, Somerset
Parker, Mrs. J. H., 204 Laurel Avenue, Corbin
Reddick, Mrs. J. T., Paducah
Thompson, Mrs. G. L., Calhoun
Thornton, Mrs. C. G., Lebanon
Threlkel, Mrs. C. C., Morgantown

## CHATTING

**Mrs. John C. Rogers, Louisville**

(With a "Curtsy" to and a Smile of Appreciation for our Advertisers.)

Mrs. James Montgomery (wife of the new doctor) smiled cozily at her visitor, Mrs. Jim Jones, her next door neighbor. The two friends, gratefully sipping cool, refreshing fruit juice drinks, were gaily gab-festing.

Edith (Mrs. Montgomery): "You know how much assistance the Auxiliary Shopping Guide has been to you and to me. You remember, too, that Sophie and her husband, Dr. Goode, moved here from Williamstown shortly after we did? Sophie joined the Auxiliary but she can not see the Shopping Guide at all!"

Mary (Mrs. Jones) bristling ferociously: "Why not?"

Edith: "Because Sophie would rather flounder around in the dark than be directed to the light! She is just that way."

Mary: "Leave Sophie to me."

Edith sighed ecstatically: "O. K. It will be like taking candy from a child."

A week later, the Auxiliary members met at Mary's home "just for fun." An advertisement party was the excuse. Each member donated something cute, pretty, useful, ornamental or attractive from her own possessions that she, herself, no longer needed or desired. Beautifully Christmassy-wrapped and fascinatingly tide-up, the gifts were piled high on a nearby table.

The advertisements had been carefully cut-up from the Shopping Guide and were jumbled together on another table and just as soon as a member could piece together an advertisement, (perfectly, of course), and paste it, correctly, she could choose a gift from the so interesting pile.

But there was a hitch in the affairs when Sophie Goode declared that she couldn't play because she did not know the advertisements like the others did, who had always lived here.

Edith's face went blank but Mary, to the rescue, with these cheerful words: "I thought of that, Sophie. We have a guest prize for you and all you have to do is be 'Judge.' You must see that each finished advertisement is 'all there' and correctly pasted before the person draws her prize."

"That is easy" said Sophie, not realizing what she was saying.

Grown-ups sometimes become children. And if you could have seen this mob of otherwise dignified, highly respected, cultivated women, as they reached into the cut-up advertisements, trying to match the pieces they already had, just

as someone snatched the coveted piece, thinking it was part of her advertisement, you would certainly have been surprised. Shrieks, shouts, pullings, tuggings, nearly tearings—as each one tried to piece hers to be among the early birds to get at the prizes and to get enough paste out of the bottle to correctly paste her advertisement, was really a scream all by itself. Poor Sophie! As Sophie held the paste bottle in her hand and all tried at once to get enough paste and all tried to show the finished advertisements at once, she cried out: "One at a time, or I quit! I haven't eyes in the back and top of my head. I can't play favorite, Ella. The last word of yours blew out of the window. No, we can't stop the fans. Mabel, you have hopelessly mixed yours with Susie's. Yes, Alice, yours is correct. Mabel! Ethel had that piece first. Well, it can't belong to both. I see one missing piece under the arm chair." Sophie paused for breath as all but Alice tried to get under the arm chair for the coveted missing piece.

And then, later, those still matching and pasting could hear the tantalizing and intriguing shouts of those who had received prizes.

Anna: "What a darling luncheon set I have drawn. Seems familiar, somehow."

Kate: "Right the first time. You gave it to me for Christmas three years ago."

Anna: "Well, don't laugh too loud. That pink boudoir lamp that Ethel has drawn was the one you gave me my last birthday."

Shouts of laughter drowned out the speakers.

Mary: "This is not funny at all! I have accidentally drawn the same tiresome old iced tea spoons I donated."

Ada; laughing so she could hardly speak: "Mary, how could you have let the cat out of the bag. They are the spoons that Mildred gave me one Christmas and I gave them to you during a depression birthday party and now you can't get rid of them!"

But the funniest, most side-splitting event of all was when things quieted down and "Judge" Goode fell among the divan cushions and turned the fan her way as she said she had worked the hardest of all and began to untie her guest box of delicious chocolates.

After the usual cooling drinks and dainty little cakes were stowed away, Mary announced that all the generous, bighearted prize-winners would place their presents in the huge basket under the table and that next Christmas, certain people, less fortunate than themselves, would enjoy the warmed-over presents, just as if they were really, truly new.

With one accord the basket was promptly filled and then Anna Brown suggested another advertisement party at her home and all agreed that "Judge" Goode would preside again. All agreed but "Judge" Goode who fanned her fevered brow and smoothed her muchly tossed-about hair and sweetly suggested Mrs. Howard Card from Hanesville, who doesn't know one advertisement from another. "Why, you-all have kept me in the dark about these wonderful shopping places, I can't see. I have been listening-in on all you all have been saying, besides judging so carefully, and you'd be surprised at the way I can rattle them all off. I get to play next time. Just listen, and here goes."

Gibbs-Inman Co.—Printers—Book Binders
Medical Arts Prescription Shop
Shrader Bros.—Cleaners and Dyers
Hampton Cracker Company, Inc.
Ewing Von Allmen Dairy Products
Honey-Krust Vitamin D Bread
The Misses Walsh—Gowns
Joseph A. Jaglowicz—Gowns
Cherokee Sanitary Milk Co.
Trigg County Hams—Cadiz, Ky.
Swiss Cleaners and Dyers
Stearns Coal Company
Donaldson Baking Company
John T. Berry—Photographer
Louisville Apothecary, Inc.
Southern Optical Company
N. M. Sanders & Sons—Eggs and Poultry
Kentucky Dairies, Inc.
B. & W. Imorde—Grocers
Jos. Denunzio Fruit Co.
Bush-Krebs Co.—Engravers
Louisville Chemical Co.
Newman Drug Co., Inc.
Medical Milk Commission
Wilderness Road Book Shop
Theo. Tafel—Surgical Supplies
The Gilliland Laboratories
Kentucky & Indiana Terminal Railroad Co.
The Times-Journal Publishing Co.
Brakmeier Bros.—Bronze Tablets
The Peter and Burghard Stone Co.

| | |
|---|---|
| Muth Optical Co. | Aetna Oil Service |
| The New York Furriers | Model Drug Store |
| Lee A. Cralle Co. | Miller Paper Co. |
| Stoll Oil Refining Co. | Young's Grocery |
| Haupt—Florist | Deckel's Market |

And—in Harlan, all those new shops and services for us, when we go to the Annual Meeting! I feel I know Harlan through them!

Kentucky-Virginia Electric Company
Harlan Drug Company
Noe's Bar-B-Q Inn
Powers & Norton —Ready-To-Wear
Skidmore Floral Comany
Wallace Confectionery

| | |
|---|---|
| Baugham & Dotson | Billie's Beauty Shoppe |
| Central Drug Co. | Green-Miller Pharmacy |
| Hugh Jones Cafe | Nu-Way Cleaners |

And so "Judge" Goode won her point! Edith and Mary squeezed hands, joyfully, and Edith whispered happily: "And, now, 'Judge' Goode and I can, at last, go shopping together without fussing and the 'Judge' will not always be telling me about 'Williamstown.' "

# CHILD HEALTH AND WELFARE

Mrs. Philip F. Barbour, Louisville, Chairman

## A LETTER FROM THE CHAIRMAN

September 1, 1934

My dear Auxiliary Friends:

One of the most interesting Health Projects that has come under my observation, is the Camp Taylor Health School in Louisville. I'm going to tell you about it because other communities may be able to accomplish much for their tubercular children through similar efforts. Tell me, please, if you know of such instances.

The Camp Taylor Health School was started in 1927 by the Louisville Tuberculosis Association which had begun its health work in the schools in 1923 and had found the health conditions in the Camp Taylor area the worst in the County. "—through Dr. Oscar O. Miller, the Lion's Club offered assistance and an anonymous friend of Dr. Miller's, donated One Thousand Dollars.—By a process of elimination, 45 of the extremely underweight children were selected for re-examination and x-ray. Parents of these children were present at the examination and learned of their special health needs.—20 children were finally selected from the group for the school. (Capacity) Each fall and spring, the children are examined by the Tuberculosis Dispensary and no child can be transferred without the sanction of Dr. Miller. The school was called a Health School, rather than an open air school because the ideal of positive radiant health was made the dominant ideal of the children—every child in the school shows a positive reaction to the tuberculin test. The County Tuberculosis Nurse, who knows practically every family in Camp Taylor; the Principal in the school, the Teachers, and, sometimes, Parent-Teacher Association members, suggest children for examination."

"The School program begins in the morning with a check-up of health rules and a morning inspection. At 10 o'clock recess, the children have cod liver oil, a raw carrot and a half pint of milk. At noon, they have a nourishing hot lunch. After lunch, the children rest on cots for two hours most of them sleeping. Just before being sent home they have more milk and brown bread and butter sandwiches."

"Although this is an ungraded school room, the children who have gone back to their regular classes have been able to keep up their academic standing. When a study of the causes of absence was made on the entire Camp Taylor School several years ago, it was found there were fewer absences from school because of colds, sore throats and respiratory disorders in the Health School than in any other class in the whole school.

"—it (the Health School) was taken over by the County Board of Education in 1933" and is now conducted as a regular educational project. But the extra milk, food, health supervision, eskimo suits, blankets, cots, etc., must be supplied by other sources. The Louis-



Courtesy of The Williams & Wilkins Company, Publishers
From Poliomyelitis—Neal. A Survey by the (Milbank) International Committee, 1932.

**Poliomyelitis?---1580 B. C.**

Reproduction of an Egyptian Stele of the Eighteenth Dynasty (1580-1350 B. C.) now in the Carlsberg Glyptothek at Copenhagen.

ville Tuberculosis Association, Community Chest, Highland Mothers Club and the Woman's Auxiliary to the Jefferson County Medical Society have contributed some of the necessities during the past year.

The above are extracts from the Report of the Camp Taylor Health School, March, 1934.

In a modified form this work has been continued during the summer and other schools in vacation time have carried on similar programs, co-operating with the older, better organized educational and social agencies in the community. One instance with which I am familiar, the Daily Vacation Bible School at the Second Presbyterian Church, Louisville, in session for 6 weeks each summer, has given milk each school day to children under 10 years. In one family, where the boy pupil was withdrawn to go to Waverly Hills for tuberculosis treatment, a quart of milk was sent each day to the brother and sister in the home where conditions were not conducive to good health.

This Good Health movement is being promoted throughout the State with Parent-Teacher organizations well in the lead of the women's groups. With the co-operation of all concerned—and that is everybody—we hope, eventually, to conquer this disease for it is both preventable and curable.

And, what do you know about Poliomyelitis? It is again in our midst. Earlier in the summer, late July, I believe, there was much anxiety as to the spread of Poliomyelitis which was already in epidemic form in California. "Past experience in Kentucky has shown that epidemic incidence of Poliomyelitis usually begins later here than in surrounding States, ordinarily occurring during August and September." — (July Bulletin of the State Board of Health of Kentucky. See, also, their August Bulletin.)

However, up-to-date there have been cases reported in the eastern part of the State. The Convalescent Serum is being used and the physicians hope that they have the situation in hand.

May I, here, say "Thank you" to each of you who have written me these more than welcome letters? And, may I hope for more?

Cordially yours,

(Mrs. Philip F.) Elizabeth Akin Barbour.

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Mrs. William C. Dugan of Finchville met with a painful and serious accident on July 23rd while motoring in Tennessee. She was taken to the Speck Hospital, Cleveland, Tennessee, whre she has since been confined to bed. We hope that she may be able to return home early in October.

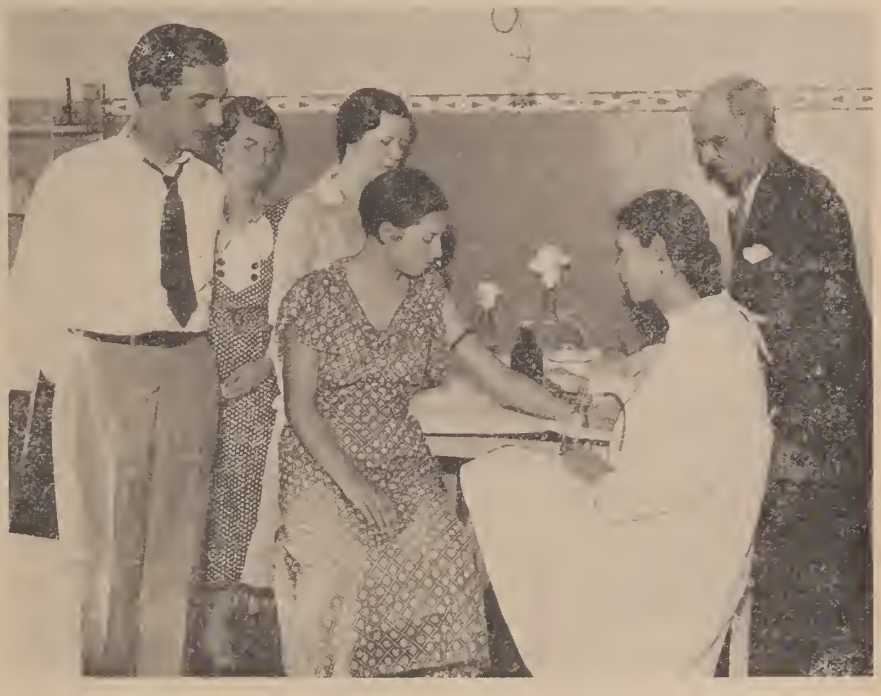
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### MAYBE YOU DIDN'T KNOW THIS

Years and years ago a barber not only cut hair and shaved chins but he also practiced minor surgery such as blood letting and wound dressing. The red and white striped barber pole of today dates back to the time of the barber-surgeons who practiced their combined professions until an English law checked them in 1745.

The stripes of white represent bandages while the stripes of red are symbolic of blood.

(Copied from The Chicago Medical News, May 10, 1934.)



Courtesy of The Courier-Journal

## Volunteer Donors

Recovered victims of Poliomyelitis, Dora Meredith and Joseph Fanelli, are the first two 1934 donors in Jefferson County to give their blood to make "Convalescent Serum." Dr. John D. Trawick, County Health Officer and Miss Carrie B. King, County Health Nurse brought the patients to the State Department of Health where Miss Virginia South, Bacteriologist, did the exacting technical work.

## COME—AND—SEE—TRIPS IN LOUISVILLE

**Mrs. A. T. McCormack, Chairman**

(Continued from July Issue)

(For the purpose of acquainting members of the Jefferson County Auxiliary with some of our civic problems and with the work of the agencies composing the Louisville Community Chest, a series of 6 programs of visitation and demonstration, one each week during the Lenten Season, was arranged under the leadership of Mrs. R. S. Witherspoon, Secretary of the Community Chest Speakers Bureau. Although an all round presentation of the work of each agency was desired, emphasis on the medical and health services was stressed in order that members might gain a clearer vision of what the medical, dental and nursing profession are doing for the community, and for the individual, service through these agencies.)

Wesley Community House

**Demonstration**

Well-Baby Clinic with impressive example of State's need for Sterilization Law and Enforcement. (Fearful snowstorm kept many mothers and babies at home but a shanty-boat mother with several of her children was present; also, some who lived nearby.)

Inspection tour of building and description of work of this Settlement House, sponsored by the Methodist Churches of Louisville.

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3:00 P. M. Jewish Children's Home
1135 South First Street

Hosts

Miss Anna Nevils, House Mother
Mrs. Lulu Krakaur, Director Jewish Welfare Federation
Dr. A. A. Shapero, Physician in Charge.

Present (7 members, 1 friend)

Group listed above with addition of Mrs. S. C. McCoy, Mrs. L. E. Smith and friend, Mrs. H. G. Kortright.

**Demonstration**

Brief history and outline of work of Home and of the recently instituted (June, 1933) work for Convalescent Children. This is the only home for Convalescent Children in Kentucky and is still in the experimental stage of development. In the first 8 months, 25 patients suffering with various types of disease (nutrition, heart, skin, etc.) have occupied the 10 beds. 2 additional beds will be added shortly. Time limit for patients is 3 months.

Inspection tour of building, a gift from former residents of Louisville, Mr. and Mrs. Nathan Hofheimer.

**Tuesday, March 6**

1:45 P. M. Susan Speed Davis Home and Hospital.**
512 W. Kentucky Street

Host
Ensign Ethel Graves

Present (16 members, 1 friend)

Adams , Mrs. R. C.
Brownstein, S. J.
Dusch, Mrs. Joseph S.
Emrich, Mrs. Wm. H.
English, Mrs. C. C.
Fitzpatrick, Mrs. J. W.
Fitzpatrick, Miss Viola
Helms, Mrs. James E.
Hume, Mrs. Walter I.
Keaney, Mrs. John M.
Kortright, Mrs. H. G.
Miller, Mrs. Oscar O.
Moore, Mrs. Charles H
McCormack, Mrs. A. T.
McCoy, Mrs. S. C.
Rogers, Mrs. John C.
Smith, Mrs. Lucius E.

**Demonstration**

Brief statement of history, purpose and procedure of Home, managed by the Salvation Army.

Inspection tour of building.

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2:45 P. M. Presbyterian Colored Mission
Hancock and Roselane Streets

Host
Mr. Charles Allen, Assistant to Rev. John Little, D. D.

Present (15 members, 1 friend)

Group listed above, except Mrs. Rogers*

**Demonstration**

Well-Baby Clinic conducted by Public Health Nursing Association, Mrs. Pearl Schlosser, Supervising Nurse. Clinic Physician—Dr. John Nurse (Col.) Clinic Nurse—Mrs. Everett Johnson (Col.) (Interesting group of mothers with well-behaved babies, all ages.)

Inspection tour of building, visiting classes then in session at this busy Settlement House where all ages find religious training, recreation of various types, instruction in manual arts and home economics.

Brief statement of history, purpose and procedure described.

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4:00 P. M. King's Daughters' Home for Incurables***
1705 Stevens Avenue

Hosts
Mrs. J. Wm. Jefferson, President, Executive Board Miss Nettie Smith, Superintendent

Present (11 members, 1 friend)

Group listed above, except Mrs. Adams,* Mrs. Fitzpatrick,* Miss Fitzpatrick,* Mrs. Moore.*

**Demonstration**

Brief history and statement of purpose, procedure and financing of the work.

Tour of inspection with calls upon residents either at their bedsides, or chairs or in the Sun Room.

Only home for incurables in the State. Partly supported by State appropriation but most funds are private donations or endowments.

**Wednesday, March 14**

12:00 Noon. Camp Taylor Health School
Kentucky Ave. and Camp Taylor

Hosts

Miss Artus James, Executive Secretary, Louisville Tuberculosis Association
Miss Rose Walz, Teacher in Health School
Dr. O. O. Miller, Medical Director

Present (24 members, 2 friends)

Adams, Mrs. R. C.
Arnold, Mrs. C. G.
Baker, Mrs. M. C.
Burt, Mrs. H. J.
(friend of Mrs. Kelsall)
Davidson, Mrs. H. A.
Emrich, Mrs. Wm. H.
Fitzpatrick, Miss Viola
Gnadinger, Mrs. Fred
(friend of Mrs. Emrich)
Hancock, Mrs. J. Duffy
Horine, Mrs. Emmett F.
Hudson, Mrs. R. T.
Jones, Mrs. John L.
Hume, Mrs. Walter I.
Mathewsian, Mrs. M. H.
Neblett, Mrs. L. W.
McCoy, Mrs. S. C.
Rogers, Mrs. John C.
Moore, Mrs. Chas. H.
Kelsall, Mrs. O. H.
Leachman, Mrs. George C.
Stroud, Miss Grace
Palmer, Mrs. E. R.
Miller, Mrs. Oliver P.
Fitzpatrick, Mrs. J. W.

**Demonstration**

Morning Health Exercises

Health Lesson on the subject of Milk

Luncheon—15c—same as provided pupils in Health School. (More nutritious than members accustomed to eating at home!)

Brief history of Health School where 20 pupils are enrolled, (capacity).

Stimulation and Supervision provided by Community Chest.

Building was a joint gift from anonymous friend and the Louisville Lions Club in 1927. Ordinary school equipment and the Teacher are provided by Jefferson County Board of Education. Unusual equipment—cots, blankets, special lockers, eskimo suits, boots, milk and food, etc.—provided by Louisville TB Association. (Funds reduced this year and milk has been provided by Highland Mothers Club, Louisville.) Suits and much essential equipment now worn out and need replacing. A total of 90 children, incipient TB cases, enrolled, to date, in this ungraded school. 41 of these made sufficient improvement to be transferred back to regular schools. Cost 29c per day for care at school, while living at home with parents, as compared to $2.25 per day, to tax payers, for similar care at Waverly Hills, Louisville and Jefferson County Tuberculosis Sanatorium. Unfortunately, gains in health and resistance made during school year are too often lost during summer vacation. Great need of funds, $300.00 at least, for vacation school so gains may be held and increased in this preventive work which means life-saving and money-saving in marked degree.

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**Wednesday, March 21**

2:30 P. M. Executive Office of the Community Chest
424 West Jefferson Street

Hosts

Miss Mary Stotsenburg, Executive Secretary
Mrs. R. S. Witherspoon, Chairman, Speakers' Bureau
Miss Elizabeth Speed
Mr. Robert Horan, Publicity Secretary

Present (5 members, 2 friends from Church groups)

Blackerby, Mrs. P. E.
Helms, Mrs. Jas. E.
McCormack, Mrs. A. T.
McCoy, Mrs. S. C.
Rogers, Mrs. John C.

**Demonstration**

Brief statement of the history, organization policies, functions, financing, governing control and personnel.

Conducted tour through building with demonstration of record keeping and record files.

---

3:15 P. M. Scouting—Boy and Girl Scout Organizations (Separate offices in same building)
424 West Jefferson Street

Hosts

Miss Frances Heger, Executive
Mr. Carl Handel, Executive
Dr. J. Murray Kinsman, Examining Physician

Present (5 members, 2 friends)

Group listed above.

**Demonstration**

Description of Health Examination and Health Care of Scouts before and during Summer Camp.

Brief general statement of work in both organizations.

Girls: Demonstration of care for bed patient and the bathing of a baby.

Boys: Playlet showing Camp Fire Session with invitation to visitor, a prospective member, to join. Life-saving demonstration in electric live wire accident.

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**Wednesday, March 28**

10:00 A. M. Social Service Building
215 East Walnut Street
Family Service Organization

Host

Miss Esther Taylor, Executive Secretary

Present (16 members, 1 visitor)

Blackerby, Mrs. P. E.
Dougherty, Mrs. Frank J.
Dusch, Mrs. Joseph S.
Hancock, Mrs. J. Duffy
Helms, Mrs. James E.
Hoddy, Mrs. E. J.
Horine, Mrs. Emmett F.
Keaney, Mrs. John M.
Lawson, Mrs. George M.
Leavell, Mrs. Hugh N.
Miller, Mrs. Oscar O.
Miller, Mrs. Oliver P.
Smith, Mrs. Lucius Ernest
Smith, Mrs. Lucien Lyne
McCormack, Mrs. A. T.
McKeithen, Mrs. A. M.
Stilley, Mrs. V. A., Benton Ky.
White, Mrs. Wm. C.

**Demonstration**

Illustrated talk showing, graphically, the excellent results obtained through intelligent, wisely planned case work tactfully conducted by 7 different agencies of the Community Chest, together with the work of the medical and dental professions, in salvaging one family—self-sustaining until caught in the "depression."

Not only the physical, mental and moral factors were presented but also the economic saving—for, at a cost of $20.00 this family was returned to independence and well grounded in the constructive good citizen group, instead of being allowed to become dependent upon public charity.

10:30 A. M. Children's Agency

Host

Miss Geraldine Graham, Executive Secretary

Present (15 members, 1 visitor)

Group listed above, except Mrs. Horine.

**Demonstration**

Narrative description of work of the Children's Agency with special emphasis on the Susan Speed Davis Home problems.

---

10:50 A. M. Social Service Exchange

Host

Miss Nettie Combs, Director

Present (15 members, 1 visitor)

Group listed above

**Demonstration**

Brief statement of history, purpose, functions and procedure.

Examination of types of records and method of keeping.

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11:00 A. M. Public Health Nursing Association

Hosts

Miss Bettie McDonald, Superintendent

Miss Charlotte Pittman, Assistant Superintendent

Mrs. Pearl Schlosser, Supervisor

Present (15 members, 2 visitors.)

Group listed above with Mrs. Ostrander added.

**Demonstration**

Brief statement of history, development, purposes, procedures.

Incubator for premature baby demonstrated.

Contents of Nurse's Bag described, shown and replaced in bag.

Technique in homes illustrated by demonstration and by models.

Literature for distribution shown.

Need for layettes, bandages, surgical dressings, etc., shown.

Any sick person may call a Public Health Nurse but she continues to care for only such cases as are under the orders of a physician. A modest fee makes her services available to patients with good incomes, while those unable to pay are given the same care gratis.

Left for previous engagement.

Mrs. Lewis Davis Morton, 80, widow of Dr. Douglas Morton and mother of Dr. David C. Morton, died August 1, at her home in the Puritan Apartments. Mrs. Morton was for 30 years, President of the Susan Speed Davis Home and Hospital, founded by her mother, Mrs. Susan Fry Davis, in 1878.

On July 13th, occurred the celebration of the Twenty-Fifth Anniversary of the Kings' Daughters' Home with the unveiling of a bronze table placed on the new $5,000.00 boiler room in honor of the late Mr. Morris Sachs, who provided for this necessity in his will.

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"The practice of medicine is an art, not a trade; a calling, not a business; a calling in which your heart will be exercised equally with your head. Often the best part of your work will have nothing to do with potions and powders, but with the exercise of an influence of the strong upon the weak, of the righteous upon the wicked, of the wise upon the foolish."

—Sir William Osler.

## MEDICAL PIONEERS HONORED

**Mrs. A. T. McCormack, Louisville**

Dedicated to the pioneer physicians who, in the 18th century, brought the art and science of medicine into the wilderness of the West, is s small brick building near the Mansion House at Pioneer Memorial State Park in Harrodsburg. On the afternoon of June 21st, 1934, before a large assembly of interested Kentuckians and their friends from Indiana, Ohio and other States, with Mrs. Emma Guy Cromwell, State Park Director, presiding, Governor Laffoon officially assigned the building to the Kentucky State Medical Association. It was accepted by the Chairman of the Council, Dr. Charles A. Vance of Lexington and the dedicatory address was made by Dr. Arthur T. McCormack, Secretary of the State Medical Association, and a direct descendant, (sixth generation) of Dr. Thomas Walker whose name heads the list of 27 medical pioneers memorialized on the bronze tablet placed at the right of the entrance. The tablet, beautifully and appropriately veiled with long stalks of varicolored hollyhocks, Harrodsburg's official flower, bound together with pink illusion, was unveiled by four descendants of these medical pioneers: Miss Mary Tyler McCormack, Miss Frances Callaway Bate and Dr. Richard Alexander Bate, all of Louisville, and descendants of Dr. Thomas Walker; and, Dr. Augustine Thornton Scott, Lexington, descendant of Dr. John Mitchell Scott. This building, now known as The Doctor's Shop, is to be furnished, as nearly as possible like a doctor's shop of the long ago. In this work of collecting and of selecting the furnishings, the Woman's Auxiliary has been asked to assist, as several years ago, they were asked to collect medical history, biographical sketches, medical superstitions, etc.

A banquet, The Pioneer Doctor's Dinner, a bountiful repast graciously served to about 400 guests by Harrodsburg's charming women in a beautiful setting of evergreens and garden flowers, was held at seven o'clock in the Lecture Hall of the Christian Church, with members of the newly organized Mercer County Auxiliary, acting as hostesses at the table designated for the descendants of the medical pioneers. Dr. C. B. Van Arsdall, Harrodsburg, President of the Pioneer Memorial Park Association, presided and presented Dr. A. T. McCormack who introduced Dr. Irvin Abell, Louisville, as the Toastmaster of the evening. Addresses were made by Governor Laffoon; Dr. Philip F. Barbour, Louisville; Dr. C. C. Howard, Glasgow; Dr. John W. Scott, Lexington; Mrs. B. K. Menefee, Covington; Mrs. George A. Hendon, Louisville; and Mrs. J. I. Greenwell, New Haven; followed by the reading of a poem, "The Country Doctor" by Mrs. Elean-

(For a more complete account of this memorable occasion and for copies of the addresses, see the Kentucky Medical Journal, November, 1934.)

or Hume Offutt, Frankfort, and the cutting, by Mrs. Ruby Laffoon, of the Birthday Cake, appropriately decorated with a minature pioneer scene showing Dr. Thomas Walker dismounting from his horse at the door of a cabin where an anxious mother with babe in arms was awaiting him. Music for the dedication ceremony was furnished by two Auxiliary members. Mrs. Robert O. Sory, Richmond and Mrs. Greene L. Johnson, Harrodsburg, and for the dinner Miss Mary Frances Duane, Miss Geraldine Thompson and Mr. Walter Merhoff, artists from the radio broadcasting station WHAS in Louisville.

## STUDY CLASS PROGRAMS

From County Auxiliary Presidents, requests have come repeatedly for Study Class Programs. Jefferson County's Programs covering the first four years, were arranged and sent to our Publisher for the April issue of the Quarterly. But, unfortunately, this was a part of the material lost in the mails and no duplicate copies were immediately available. Now, however, through the co-operation of Mrs. John K. Freeman, Mrs. Wm. E. Fallis and Mrs. Curt H. Krieger, we are able to present these programs. And, in addition, we also have the 1933-1934 Program—conducted by Mrs. James D. Gibbs

### 1930

Mrs. John K. Freeman acted as Chairman of the first Jefferson County Study Class which met at 10 o'clock every Monday morning at the Y. M. C. A., Louisville, for 9 consecutive weeks, beginning February 10, 1930. On February 3, the Monday before the Class Study began, Mrs. Freeman and the interested group met at the State Board of Health (now the State Department of Health) and were shown through the different Bureaus by the Bureau Directors. Then, in the Class Room of the State Board of Health, tea was served while additional questions were answered and more explanations made. The subject perused under Mrs. Freeman's guidance, was "The Medical and Health Laws of Kentucky" with a brief lesson each week on "The United States Public Health Service." These series of lessons, (both subjects prepared by Auxiliary members, in multigraph form, then) are now in print and may be obtained by writing to the State Department of Health, Louisville, requesting a copy of "The Medical and Health Laws" Bulletin. Every new member should write for this Bulletin and study it, preferably with a group, but by herself if need be, in order to inform herself properly on the laws relating to the medical profession, for, with the physician, they reach into the homes and into the lives of all of our citizens. Study Classes are urged to make this their first subject.

The second year's work, under the Chairmanship of Mrs. Wm. E. Fallis, was devoted to a study of the "History of Medicine" followed by "Current Events," the latter, led by a regularly appointed Chairman. These classes met once each month, on the first Monday, as they continue to meet, at the Brown Hotel, Louisville.

The third year, again under the leadership of Mrs. Fallis, opened with another group studying the "Medical and Health Laws of Kentucky," the "Brief Outlines on the United States Public Health Service" and the "Study Envelopes of the American Medical Auxiliary." This was followed by "Current Events" along medical lines, as previously. Having completed this work before the end of 1931, a new Course on "America's Part In Medical History" was started in January, 1932, and carried through to the summer recess. Mrs. S. W. Bates presented the "Current Events."

### 1930-1931

**"History of Medicine"**
**Jefferson County Study Course**
**Chairman—Mrs. W. E. Fallis**

Original papers prepared, after much study, by Auxiliary members.

1930

October 6—
- "Primitive Medicine"—Mrs. J. Paul Keith
- "Hippocrates and Some of His Followers"—Mrs. Harry W. Venable
- "Current Events"—Mrs. S. W. Bates

November 3—
- "Galen"—(Pliny—Celsus-Galen: 200 A. D 1500 A. D.)—Mrs. R. D. Sanders
- "The Middle Ages and Rebirth of Science"—Mrs. D. A. Bates
- "Current Events"—Mrs. S. W. Bates

December 1—
- "Harvey and the Circulation of the Blood"—Mrs. Emmet F. Horine
- (Dr. Horine showed his motion picture on the heart for illustrative material)
- "The Doctor of a Hundred Years Ago"—Mrs. W. C. Dugan ( A Story)
- "Current Events"—Mrs. S. W. Bates

1931

January 5—
- "The Return to Clinical Medicine" (Sydenham, the two Hunters, Boerhaave)—Mrs. J. K. Freeman
- "The Evolution of Pathological Anatomy"—(Bichap, Laennec, Malpighi, Verchow)—Mrs. J. C. Ray
- "Current Events"—Mrs. S. W. Bates

February 2—
- "Foundation and Growth of Bacteriology"—Mrs. J. D. Allen
- "Recognition and Control of Epidemic Diseases"—Mrs. O. H. Kelsall
- "Current Events"—Mrs S. W. Bates

March 2—
- "Development of Differential Diagnosis"—

Miss Grace Stroud
"Anaesthesia"—Mrs. G. A. Hendon
"Current Events"—Mrs. S. W. Bates

**At the Quarterly Luncheon**

"The Medicine Man of Texas,"—Mrs. S. C. Red (Book Review) Mrs. J. N. McCormack

April 6—
"Stepping Stones In the Development of Surgery"—Mrs. Irvin Abell
"Current Events"—Mrs. Blanche Blake

May 4—
"Roentgen Ray and Radium"—Mrs. R. E. Doughty
"Current Events"—Mrs. S. W. Bates

June 1—
"Insulin"—Mrs. Allan Tuggle
"Current Events"—Mrs. S. W. Bates

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**1931-1932**
**"Medical and Health Laws"**
**Jefferson County Study Course**
**Chairman—Mrs. W. E. Fallis**

1931

October 5, November 2, December 7, 1931—
Class periods were devoted to a Study, Question and Answer method, of the "Medical and Health Laws of Kentucky," brief descriptions of the organization and functions of the United States Public Health Service, and the Study Envelopes of the American Medical Auxiliary.
"Current Events," to which all contributed, during last 10 or 15 minutes.

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**"America's Part In Medical History"**

Original papers were prepared, following study and research by Auxiliary members.

1932

January 10—
"Early American Physicians"—Mrs. D. M. Cox
"Current Events"—Mrs. S. W. Bates

February 5—
"Hospitals and Medical Schools"—Mrs. C. H. Krieger

March 5—
"America's Three Hundred Years of Medical Leaders"—Mrs. J. K. Freeman
"Current Events"—Mrs. Blanche Blake

April 4—
"Kentucky's Part in American Medical History"—Mrs. Wm. C. White
"Last Will and Testament of Mrs. Wm. M Irvine"—Read by Mrs. A. T. McCormack

May 2—
"Medical Progress in the Twentieth Century"—Mrs. Irvin Abell

June 6—
"Cults and Isms"—Mrs. Harry W. Venable
"Current Events"—Mrs. S. W. Bates

During the fourth year's work, Mrs. Irvin Abell acted as Chairman with Mrs. S. W. Bates, Mrs. Blanche Blake, Mrs. George A. Hendon and Mrs. L. Lyne Smith giving the "Current Events." The subject for study was "The Doctor in Literature." Following is a copy of the statement concerning the Course and the "Suggestions to Book Reviewers" sent to all members of the group.

**1932-1933**

**"The Doctor in Literature"**
**Jefferson County Study Course**

**Chairman—Mrs. Irvin Abell**

For this term's study work, we propose to discuss the doctor in literature, both as a writer himself, and as very interesting character material for other writers.

We feel that the topic should appeal especially to us as Auxiliary members, for no one knows him better than we whose lives are so closely interwoven with his life and work. We should be especially fitted to judge books that he has written (outside of scientific works) or that were written about him.

Writers have long made use of the qualities that make up a good physician, and have used him as subject material for song and story. They have realized in him, more than in all others, perhaps not even excepting the clergyman, that his development has been brought about by the exercise of courage, patience, endurance—both mental and physical—kindness, tact, discretion, quick decisions and many other qualities.

We have prepared a reading list of some well-known books about the doctor both as author and as subject matter. If any member wishes to add to this list we would be very happy for the suggestions. We can insert them as we go along.

These lists are to be distributed to study group members to be read by them, so that they may be prepared to discuss each review. We are hoping to deal with the books in the order in which they come, having about two at a meeting. We hope that all members will be perfectly free in discussing their viewpoints on each book that has been reviewed.

The discussion among the members following each review is limited to ten (10) minutes.

The chairman will ask for opinions, (pro and con) from the floor in order to start and guide discussion.

After the ten minutes are up, the chairman will proceed by calling on the next reviewer.

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**Suggestions to Book Reviewers**

Begin with a brief interesting account of the author's biography, if available.

Give a little of the geography of the place where the scene of the story is laid, if unusual or having an influence upon it. Mention the manners and customs of the inhabitants if of special interest.

Give a short but entertaining synopsis of the story, not telling the ending if possible. Thus some present who have not done so, may be incited to read it for themselves.

Dwell especially on the character of the doctor and his works as shown in the book. Mention other characters or points of interest connected with his life or bearing upon the theme.

Be sure to relate or quote any wise philosophy or humorous sayings in the story.

Read any selections or passages that are relevant.

Ten (10) minutes are given to the book reviewer if the book material is of short or medium duration. Otherwise, take fifteen (15) minutes.

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The list of books reviewed is given together with the names of the authors and of the members who gave the reviews.

1932

October 3—
- "Song Of The Stethoscope," Oliver Wendell Holmes, M. D.—Mrs. Philip F. Barbour
- "Poets Among the Doctors," Thomas Dunn English, M. D.—Mrs. Philip F. Barbour
- "Sweet Alice Ben Bolt," Soprano Solo—Mrs. E. C. Redmon (Illustrating Dr. English's work)
- "Dr. Luke of Labrador," Norman Duncan—Mrs. John K. Freeman
- "Current Events"—Mrs. S. W. Bates

November 7—
- "The Story of San Michele," Axel Munthe, M. D.—Mrs. Hugh N. Leavell
- "The Village Doctor," Sheila Kaye-Smith—Mrs. W. K. Kannard
- "Current Events"—Mrs. S. W. Bates

December 5—Christmas Stories
- "The Seven Travellers," Charles Dickens—Mrs. W. C. Dugan
- "The Gift of the Magi," O. Henry—Mrs. W. C. Dugan
- "Current Events"—Mrs. S W. Bates

1933

January 9—
- "Arrowsmith," Sinclair Lewis—Mrs. L. Lyne Smith
- "Current Events"—Mrs. S. W. Bates

February 6—
- "And Life Goes On,"Vicki Baum—Mrs. W. E. Fallis
- "The Doctor's Window," Poems, compiled by Ina Warren—Mrs. J. D. Hancock
- "Current Events"—Mrs. S. W. Bates

March 6—
- ,'The Lame, The Halt and The Blind," H. W. Haggard, M. D.—Mrs. E. F. Horine
- "Devils, Drugs and Doctors," H. W. Haggard, M. D.—Mrs. G. A. Hendon
- "Current Events"—Mrs. S. W. Bates

April 3—
- "The Good Shepherd," John Rathbone Oliver—Mrs. Wm. C. White
- "Slinky and the Burtons," Jane Woodson Rogers—Mrs. Hugh N. Leavell (An original Easter story, written by one of our own members)
- "Current Events"—Mrs. Blanche Blake and Mrs. G. A. Hendon

May 1—
- "Noguchi," Gustave Eckstein, M. D., D. D. S.—Mrs. P. E. Blackerby
- "A Doctor of the 1870 and '80's," Wm. Allen Pusey, M. D.—Mrs. Blanche Blake
- "Current Events"—Mrs. L. Lyne Smith

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**Suggestions for Other Reviews**

- "Doctor North and His Friends," S. Weir Mitchell, M. D.
- "The Challenge of Love," "Roper's Row," and "Sorrell and Son," Warwick Deeping, M. D.
- "K," Mary Roberts Rhinehart
- "The Young Physician," Francis Brett Young, M. D.
- "Doctor Bryson," F. H. Spearman
- "The Physician Himself," D. W. Cathell, M. D.
- "The Physician's Wife," Ellen M. Firebaugh
- "Napoleon In Exile," Barry O'Meara, his late surgeon. (Pub. 1822)
- "The Doctor of the Old School," John Watson
- "Hatters Castle" and "Three Loves," Archibald J. Cronin, M. D.
- "The Soul of a Woman," Marbourg Lambrosa

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**1933-1934**

**"The Doctor in Literature"**

**Jefferson County Study Course**

**Chairman—Mrs. James D. Gibbs**

Mrs. James D. Gibbs, formerly Mrs. S. W. Bates, acted as Chairman of the 1933-1934 Study Class with Mrs. Blanche Hibbitt Blake and Mrs. L. Lyne Smith giving "Current Events." The subject, continued from the previous year, was "The Doctor in Literature." The list of books, names of authors and the reviewer are given below:

1933

October 2—
- "Out of My Life," Albert Schweitzer, M. D.—Miss Adelaide Bostick
- "Current Events"—Mrs. Blanche Hibbitt Blake

November 6—
- "Arches of the Years," Holiday Southland —Mrs. W. E. Fallis
- "Current Events"—Mrs. Blanche H. Blake

December 4—

"Our Movie Made Children," James Forman—Mrs. E. F. Horine

"A Hundred Million Guinea Pigs," Arthur Kallet and F. J. Schlank—Mrs. Arch Herzer

"Current Events"—Mrs. Blanche H. Blake

1934

January 8—

"Life Begins At Forty," Walter Pitkin—Mrs. J. Paul Keith

"The Awakening of Japan," Erwin Baelz—Miss Grace Stroud

"Current Events"—Mrs. L. Lyne Smith

February 4—

"The Great Doctors," Henry E. Sigerist—Mrs. E. L. Pirkey

"Current Events"—Mrs. L. Lyne Smith

March 6—

"The Joy of Living—An Autobiography," Franklin H. Martin, M. D.—Mrs. P. E. Blackerby

April 2—

"Napoleon In Exile," Barry O'Meara—Mrs. W. K. Kannard

"Personal Reminiscences of Life in Japan," —Mrs. S. S. Jenkins

"Current Events"—Mrs. L. Lyne Smith

May 7—

"Crowded Hours," Alice Roosevelt Longworth—Mrs. J. K. Freeman

## BOOK REVIEW

### LONG REMEMBER

**Mrs. W. C. Dugan, Finchville.**

**Long Remember** is written by MacKinley Kantor. There is no doubt that one of the greatest themes for our American writers, be they novelist, poet or dramatist, is the Civil War. The Literary Guild chose this book for their May selection. It is the story of the Battle of Gettysburg with the principal characters, the citizens of Gettysburg. The chief figure is Daniel Bale whose sympathies incline towards peace. But, a love affair causes a revolution inside of him, and at the end he sets out to be a soldier.

Auxiliary members will love dear old Dr. Adam Duffey and sympathize with his wife, so anxious about him as he forgets himself in the care of his patients.

The account of Gettysburg is historically correct, the action in the book is swift, but advances to a definite climax. In the Bibliography at the end of the book, the Author says that the battle fought in the foregoing pages is the actual battle which was fought at Gettysburg those three awful days and not a bit of fiction. It is a book well worth reading and, like its title, the reader will long remember it.

Published by Coward McCann, 55 Fifth Avenue, New York, 1934. 404 pages. For sale at Wilderness Road Book Shop, Louisville. $2.50.

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